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LANGUAGE AS A MARKER OF CEO TRANSITION AND COMPANY PERFORMANCE

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LANGUAGE AS A MARKER OF CEO TRANSITION AND COMPANY PERFORMANCE

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Dedication

To Devendra Singh—who had such a profound impact on my personal, professional, and spiritual growth.

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LANGUAGE AS A MARKER OF CEO TRANSITION AND COMPANY PERFORMANCE

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An increasing number of researchers are beginning to explore leadership effectiveness in the context of language. To gain a better understanding of what constitutes an effective leader, particularly in the context of transition (exiting or entering leadership role), the current project examined Chief Executive Officer (CEO) language use in quarterly conference calls and its' association with company performance. Three research questions were asked: 1) What language patterns are associated with an outgoing CEO versus an incoming CEO? 2) To what degree does CEO language change depending on whether company performance increases or decreases in the year prior to exiting tenure or subsequent to their entering tenure 3) To what degree does CEO language predict company performance and company performance predict language use? In order to answer these questions, language use in the question and answer portion of quarterly conference calls was examined for 215 companies in the year prior to

old CEO departure and in the first year for new CEO. Computerized text analysis was used to examine language associated with self-focus, other-focus, and positive and negative affect. Results suggest that old and new CEOs use distinctive language patterns when they are entering and exiting their leadership positions. Language was found to predict company performance and company performance was found to predict language. The current project points to the power of language as a tool to explore leadership effectiveness in the context of transition. Specifically, language analysis can help identify degree of old CEO detachment and new CEO assimilation within their company. In addition, language can be used as a marker of company performance.

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Chapter 1: Introduction

A company's performance is driven by many factors, including the effectiveness of its Chief Executive Officer (CEO). CEOs differ in terms of their style, the way they interact with their subordinates, their effectiveness, and how they represent their respective organizations outside the firm (Bennedsen, Nielsen, Pérez-González, & Wolfenzon, 2007; Bertrand & Schoar, 2003; Malmendier & Tate, 2005; Pérez-González, 2006). Corporate governance involves not only a good understanding of the market, but also effectively managing teams, promoting good team practices, and effectively communicating to the public and financial analysts.

The variability in CEO performance is especially important now that transitions between leadership roles are more frequent now than in the past (Manderscheid & Ardichvili, 2008). In the year 2006, more CEOs left their jobs than in any other year (Challenger, Gray, & Christmas, 2006). Why this is occurring is still unclear; however, what is more important is that these transitions are disruptive to organizations and work teams (Watkins, 2003, Bear, et al., 2000; Van Maanen, & Schein, 1977). Understanding and predicting variability in these transitions is critical for organizations undergoing leadership changes. The process of transitioning between CEOs also provides behavioral scientists with a volatile and narrow window of time in which companies are often either saved or lost.

A CEO's success is typically measured through stock market performance using a number of financial indicators developed by Wall Street analysts. However, financial indicators are not the only measures that influence analysts and investors. For example, CEOs are also evaluated based on their likelihood of succeeding--including assessments of status/reputation, personality, background, and general communication style. Uncovering other measures associated with company performance can strengthen existing methodologies and provide a more complete picture of what influences company success.

Since CEOs, and leaders more broadly, spend the majority of their time communicating through language, the analysis of their words has the potential to gain a much better understanding of what constitutes an effective leader (e.g. Conger & Kanungo, 1998; Gardner & Avolio, 1998; House, Spangler, & Woycke, 1991). Furthermore, as will be discussed in sections below, using computerized text analysis to assess how language might impact performance can complement previous methods used in investigating this phenomenon.

The main purpose of this study is to examine how CEOs' communications differ depending on whether they are exiting or entering tenure and how their language is associated with company performance. A naturalistic method using spoken speech will be used to assess CEO's linguistic style. This research is driven primarily by the following research questions: 1) What language patterns are associated with an outgoing CEO versus an incoming CEO? 2) To what degree does CEO language change depending on whether company performance

increases or decreases in the year prior to exiting tenure or subsequent to their entering tenure 3) To what degree does CEO language predict company performance and to what degree does company performance predict language use?

Leadership

Leaders play a large role in the performance of teams, groups, and organizations. Organizations prosper under the direction of good leaders. Although environmental circumstances such as economic recessions can influence leader performance, leadership potential is largely a function of individual characteristics contributing to personal and communication style, such as emotional intelligence, charisma, education, experience, and background. This begets the most fundamental and critical question in leadership research-- what makes a good leader?

From an evolutionary perspective, leadership is essential for social animals, or animals living in groups. Although living in groups affords safety and differentiation of roles, novel issues arise in these contexts. Individuals within a group have to coordinate their actions to avoid redundancy and to optimize group success. Leadership can facilitate the problem of group decision-making. Evolutionary biologists define leadership as behaviors that determine the type, timing, and duration of group activities (Krause & Ruxton, 2002). Having a leader, then, can simplify problems associated with group living, thereby facilitating the performance or effectiveness of a group.

All leaders are not created equal. Some leaders are more effective in coordinating and differentiating group tasks, and understanding the needs of the followers. Consequently, some groups or organizations are more effective than others. Because the ultimate goal of leadership is to increase the effectiveness of a group, an abundance of research has examined the link between leadership effectiveness and individual differences, such as personality and leadership style.

Individual Traits and Leadership

Years of research have linked various personality traits with leadership. Specifically, traits associated with the five-factor model of personality have been widely investigated in the context of leadership (Wiggins, 1996). The dimensions of this model include Extraversion, Agreeableness, Conscientiousness, Emotional Stability, and Openness. An extensive meta-analysis examined the relationship between these dimensions and leadership (Judge, Bono, Ilies, & Gerhardt, 2002). Across 78 studies, they found that all five dimensions were related to overall leadership (leadership emergence and leadership effectiveness combined). Extraversion was the strongest correlate of leadership, followed by conscientiousness and openness to experience. Another meta-analysis specifically on the five factors and transformational leadership (Bono & Judge, 2004) observed positive correlations for extraversion (0.24), conscientiousness (0.13), openness (0.15), and agreeableness (0.14), and a negative correlation for neuroticism (− 0.17).

Extraversion, in particular, has been recognized as the strongest and most consistent correlate of transformational leadership (Bono & Judge, 2004; Judge, Bono et. al., 2002). Extraversion is characterized by assertiveness, energy, gregariousness, and optimism (Costa & McCrae, 1992). As revealed in assessments of job satisfaction (Judge, Bono, Ilies, & Gerhardt, 2002; Judge, Erez, Bono, & Thoresen, 2002) and subjective well-being (DeNeve & Cooper, 1998), extraverts experience and express more positive emotions. They are also more likely to emerge as group leaders (Judge, Bono et al., 2002; Judge, Erez et al., 2002; Stogdill, 1948) and to be perceived as "leader like" (Hogan Curphy, & Hogan, 1994) due to their optimistic views of the future.

Conscientiousness and openness to experience have also been associated with leadership. Individuals high on conscientiousness are disciplined in pursuing their goals, efficient, have a strong sense of direction, and are polite in most interpersonal interactions (Costa & McCrae, 1992; Hogan & Hogan, 2001). Thus, job performance (Barrick & Mount, 1991) and cooperation in a team context are positively associated with this dimension. Openness to experience, on the other hand, is associated with being intellectually curious (McCrae, 1996), creative, introspective and insightful (John & Srivastava, 1999). Individuals with this trait are more likely emerge as leaders and be effective leaders (Judge, Bono et al., 2002; Judge, Erez et al., 2002) and more readily cope with organizational change (Judge, Thoresen, Pucik, & Welbourne, 1999).

Unlike the abundance of research linking positive traits and leadership, there is a dearth of research exploring the relationship between negative traits, such as narcissism and hubris, and leadership. Arguably, negative traits leading to poor performance are just as important as positive traits leading to effective performance. For instance, narcissism is characterized by arrogance, self-absorption, entitlement, and hostility (Rosenthal & Pittinsky, 2006). Accordingly, narcissistic leaders' interpretation of information is more likely to be self-serving and their decisions tend to be based on how they will reflect on their reputations (Judge, Piccolo, & Kosalka, 2009).

Not surprisingly, narcissistic leaders' behaviors have been linked with negative consequences. Narcissism has been negatively related to ratings of leadership integrity and interpersonal performance (Blair, Hoffman, & Helland, 2008). In an examination of leadership and social value orientations, Van Dijk and De Cremer (2006) found that narcissistic managers are more self-serving and are more likely to allocate scarce organizational resources to themselves. Accordingly, narcissistic leaders are generally viewed negatively by others as indicated by lower job performance and fewer examples of organizational citizenship among subordinates (Judge, LePine, & Rich, 2006).

In addition to narcissism, hubris has also been examined in the context of negative leadership. A hubristic individual exhibits excessive pride, inflated self-confidence, and generally speaking holds a higher view of themselves in terms of their abilities and accomplishments. Leaders with this trait are likely to be

defensive against most forms of critical feedback (Baumeister, Campbell, Krueger, & Vohs, 2003). Rather than considering the validity of negative feedback, hubristic leaders question the competence of the evaluator and the validity and credibility of the evaluation technique (Kernis & Sun, 1994).

The importance of uncovering individual traits associated with leadership and leadership effectiveness is highlighted by evidence that traits predict subsequent behaviors. Fleeson and Gallagher (2009) conducted a meta-analysis over 8 years, using 15 experience-sampling studies including over 20,000 reports of trait manifestation in behavior. Participants identified traits using self-reports and then described their current behavior several times a day as the behavior was occurring. Results suggest that traits are strong predictors of how people actually behave in real situations. Thus individual difference markers can give us a strong sense of how people will behave in leadership situations and how effective they may be as leaders. Most importantly, behavioral differences have also been linked with transformational leadership, which has been widely investigated in the context of leadership effectiveness.

Transformational Leadership

Various studies have found a relationship between transformational leadership behaviors and organizational effectiveness (Avolio, 1999; Avolio, Bass, & Jung, 1995; Dumdum, Lowe, & Avolio, 2002) and performance of their subordinates (Judge & Piccolo, 2004; Lowe, Kroeck, & Sivasubramanian, 1996). Transformational leaders are seen as agents of social and organizational change

(Bass, 1985; Bass, Avolio, Jung, & Berson, 2003). They move followers beyond immediate self-interests through idealized influence, often referred to as charisma, motivational inspiration, intellectual stimulation, or individualized consideration (see Bass, 1999).

According to Bass (1999) "Idealized influence and inspirational leadership are displayed when the leader envisions a desirable future, articulates how it can be reached, sets high standards of performance, and shows determination and confidence. " The second attribute, inspirational motivation, has been suggested to be a subset of idealized influence (Bass, 1985). According to Judge & Bono (2000, p. 751), for the leader to be both inspirational and motivating, they must have articulated a "clear, appealing, and inspirational vision to the followers." Inspirational leaders motivate through their own confidence, enthusiasm, and belief that the potential, desired outcomes are attainable (Bass & Avolio, 1994). Intellectual stimulation involves the leader helping the follower to be more innovative and creative. And finally, in individualized consideration, leaders provide support for the group, pay attention to the group's developmental needs, and coach the followers.

In examining the components of transformation leadership, Levine (2010) revealed that the verbs used most often to define Bass's (1985) four attributes are *influence, inspire, communicate, and motivate*. According to Spitzberg and Cupach (1984), effective articulation, inspiration and motivation are components of competent communication. Thus it seems that effective communication skills

are essential for transformational leadership, and Levine (2010) emphasizes the importance of and need for scales that measure transformational leadership to include items geared toward understanding the communication of a leader

Charismatic Leadership

Charismatic leadership is similar to transformational leadership, as it examines the relationship between the leader and the followers, focuses on issues relating to vision, risk-taking, enthusiasm, and confidence (Hoyt & Ciulla, 2004). It is also universally characterized by the ability to communicate effectively (Rosenberg & Hirschberg, 2009). Some theorists have suggested that charismatic leadership is a subdimension of transformational leadership; others state that the two theories overlap but each identifies unique and important aspects of the leadership process (Yukl, 1999).

Charisma is defined by self-confidence (albeit non- excessive), extraordinary emotional expressiveness, and optimism that set one individual apart from others (Weber, 1947). Charismatic Leadership Theory (CLT) contends that charisma leads to leadership effectiveness and superior firm performance (Conger & Kanungo, 1998: 36–37). Similar to transformational leadership, charismatic leaders have the ability to formulate and articulate an inspirational vision, thereby leading followers to perceive them and their missions as extraordinary (Conger, Kanungo, & Menon, 2000). Accordingly, individuals choose to follow these leaders out of perceptions of the leaders' extraordinary character, conveyed

through an emotionally expressive, confident, and optimistic communication style, rather than formal authority (Weber, 1968).

Indeed, an abundance of evidence suggests that charismatic leadership is positively associated with subjective indicators of leaders' effectiveness (Judge & Piccolo, 2004; Conger, Kanungo, & Menon, 2000; Lowe, Kroeck, & Sivasubramaniam, 1996) and that this relationship exists across cultures (Dastmalchian, Javidian, & Alam, 2001; Fikret Pasa, Kabasakal, & Bodur, 2004; Fuller, Patterson, Hester, & Stringer, 1996). Subjective indicators of leader performance that are correlated with charisma include satisfaction, motivation, trust, and perceived group performance. Thus, a large and diverse body of literature supports the main thrust of CLT—namely that charisma is linked with subordinates' ratings of effective leadership.

Although some researchers suggest that charisma is mainly a leader-follower phenomenon (Seltzer & Bass, 1990), others report that charismatic leadership extends beyond and also makes a significant impact on the life of the organization (Tejeda, Scandura, & Pillai, 2001; Flynn & Staw, 2004), particularly when the leader is a top executive, such as a chief executive officer (CEO). Below I review the literature on links between charisma and effectiveness of the organization or group beyond leaders' immediate subordinates.

Charismatic leadership and positive emotions

Positive emotions have been linked to charismatic leadership as well as the kinds of outcomes (e.g., cooperation, task performance, motivation) achieved by

charismatic leaders (Bono & Ilies, 2006). For example, positive affect is associated with task performance (see Isen, 2004 for a review), and group affective tone, or positive group mood, has been linked with greater group effort and coordination (Sy, Cote, & Saavedra, 2005), increased cooperation and decreased conflict within the group (Barsade, 2002), and better subjective performance assessments (Totterdell, 2000).

Charismatic leadership and positive affect are also associated with motivation and effort. Researchers have argued that leaders' use of positive emotional expression is associated with mood states of followers (Bono, 2006) and that these elicitations of emotional arousal are associated with achieving desired changes (Conger & Kanungo, 1998). In addition, positive affect and charisma have been positively associated with dimensions linked to company performance, such as employee cooperation or contextual performance (Motowidlo & Van Scotter, 1994), job satisfaction (Thoresen, Kaplan, Barsky, Warren, & de Charmont,, 2003), citizenship behaviors at work (Ilies, Scott, & Judge, 2006), and subjective well-being (Diener, Oishi, & Lucas, 2003). Thus, research suggests positive emotions and mood contagion link charismatic leadership with outcomes, such as cooperation, follower satisfaction, motivation, and performance.

The preceding sections suggest that leaders' individual characteristics and traits have a huge impact on subordinates, groups, and organizations. Thus, the degree to which individuals vary in personality, transformational leadership, and charisma influences leadership effectiveness. In addition, research on charisma

highlights the importance of leader communication in effective leadership. In general, communication style can reflect individual characteristics and traits and interpersonal processes (Chung & Pennebaker, 2007); thus, it is not surprising that a communication style associated with charisma is related to effective leadership. In fact, the idea that language and communication are fundamental to effective leadership has been around for a long time.

Language and Leadership

Fairhurst and Sarr (1996, xi) argue that, "leadership is a language game, one that many do not know they are playing." As demonstrated by this quote, leadership researchers recognize the importance of language in the leadership process, (e.g., Bligh, Kohles, & Meindl, 2004a,b;Conger, 1991; Conger & Toegel, 2002; Insch, Moore, & Murphy, 1997;Conger & Kanungo, 1998; Thayer, 1988; Willner, 1984), and there is a broad consensus that language plays a large role in leadership (Conger, 1991; Conger & Kanungo, 1998; Fiol, Harris, & House,1999; Gardner & Avolio, 1998; House & Shamir, 1993; House, Spangler, & Woycke, 1991;Willner, 1984). Researchers emphasize that leadership is the management of meaning (Smircich & Morgan, 1982). This notion suggests that leaders attempt to shape the meaning or frame and define the reality of other individuals through their use of language. Leaders' socially constructed realities are used by followers as reference points for their behaviors and interpretations. Indeed, as discussed above, the leader's ability to influence and help define followers' social realities is central to the main arguments of CLT and effective leadership. By extension,

leaders' "management of meaning" can also influence people external to the company, since executive leadership hinges on language and discourse both inside and outside the company (Fanelli & Grasselli, 2006).

As stated by Conger (1991),

A leader must not only be able to detect opportunities in the environment but to describe them in ways that maximize their significance. This ability to describe influentially and use language effectively is captured by the simple story of two stone masons who, while working on the same project, were asked what they were doing. The first replied: "I am cutting stone;" the second: "I am building a great cathedral." (p. 31)

These quotes show that the framing of a message, or the way people speak, can dramatically alter our perceptions. Effective leaders are the ones who frame messages in such a way as to inspire and promote their mission, goals, and beliefs, and build excitement about the future.

Up to this point I have been discussing leadership in a general way. Now I would like to discuss a more specific leadership position: CEOs are an important group to investigate because they are arguably the most powerful leaders within a company. Their influence crosses multiple hierarchical relationships and their skills can play a huge role in company performance. Shedding light on why some CEOs are better than others, particularly in their ability to communicate or through their use of language, will lead to a better understanding of effective

leadership in general and address unanswered questions associated with what sorts of communication differentiates effective leaders from non-effective leaders.

Importance of CEO and variability

Previous research has demonstrated that CEOs are a driving force behind company performance. CEOs account for about 14% of the variance in firm performance (Joyce, Nohria, & Roberson, 2003). This is a strikingly large percentage given that industry sector (e.g. food manufacturing, banking & financial) accounts for about 19% of that variance (McGahan & Porter, 1997). More recent research supports the idea that CEOs are critical for company performance. Bennedson and colleagues (2007) examined CEO impact on company performance by exploring the effects of CEO deaths and deaths within the CEOs' immediate families (i.e., children, spouse, parents). Deaths of CEOs and immediate family members were strongly related to decreases in profitability, investment, and sales growth. These shocks were larger in industries that were rapidly growing, had higher investment, and higher focus on research and development (R&D).

Not only are CEO deaths associated with decreases in profitability, CEO transitions in general are disruptive to organizations (Van Maanen & Schein, 1977; Watkins, 2003). During the past decade, the incidence of new leaders taking over existing teams has increased (Liberum Research, 2006; Manderscheid & Ardichvili, 2008). The costs associated with executive role transitions can be significant. The cost of a failed hire has been estimated to be 24 times base

compensation (Smart, 1999). This goes beyond the costs associated with recruitment, replacement, or disruption of relationship with customers. Additionally, it takes time for a leader to become productive, assimilate into a new role, and begin generating expected results (Levine, 2010). Even the most accomplished and effective leaders need time to assimilate into their roles. The majority of internal and external hires report taking at least 90 days to reach moderately high levels of productivity following a new role transition, and 62 percent of external hires and 25% of internals reported needing more than 6 months to get comfortable in a new role or "get up to speed" (Institute of Executive Development & Alexcel Group, 2007). According to a recent study by Heidrick & Struggles, 40% of senior-level executives were pushed out, failed, or quit within 18 months of their new role (Masters, 2009). Thus, this highlights the importance of identifying and detecting what characteristics or psychological states may influence variability in ability to assimilate as well as ability to perform effectively.

Although CEOs clearly influence company performance, there is large variance in degree of influence and actual caliber of performance. Barrick, Day, Lord, and Alexander (1991) compared high performing CEOs to average performing CEOs, finding that, during their tenure, high performers provided an additional $25 million in value to an organization. This research bolsters the idea that all CEOs are not created equal, thus highlighting the need to identify characteristics that differentiate high versus low performing CEOs. The sections

below discuss how, similar to other leaders more broadly, the degree and caliber of CEO influence on organization performance is impacted by a wide variety of factors, including status and power, education, background, and individual characteristics or traits.

CEO Traits and Performance

Consistent with leadership research, CEO individual differences have also been implicated in performance. Bertrand and Schoar (2003) found that CEO demographics, such as age, predict firm behavior. Specifically, age and education of the CEO were especially relevant to acquisition or diversification decisions, dividend policy, interest coverage, and cost-cutting policy. Older CEOs tend to be less aggressive, as indicated by a lower level of capital expenditures, lower financial leverage, and higher cash holdings. On the other hand, CEOs who have an MBA are more aggressive, have a higher level of capital expenditures and more debt, and pay fewer dividends. Furthermore, CEOs who hold their MBA degree have a 1 percent higher rate of returns on assets and have higher operating returns on assets. Thus, directly observable characteristics, such as age and education, are linked with company performance.

Although, observable characteristics are, at best, proxies for underlying psychological factors (Hambrick & Mason, 1984), gathering large data sets with underlying factors for CEOs is difficult. Also, using observable characteristics ignores the different styles and characteristics associated with CEO influence that may play a larger role in CEO performance. Below I will expand on research

exploring how differing characteristics and styles of CEOs is associated with various aspects of performance.

CEO Characteristics and Styles

Various CEO characteristics and managerial practices have been associated with CEO performance. Research using a large scale survey suggests that firm performance is influenced by different management practices, such as tracking the performance of individuals within the company, goal types (i.e., realistic, complex, or simple), and promotion criteria, to name a few (Bloom & Van Reenen, 2007). In particular, measures of better managerial practice are strongly associated with enhanced firm performance by impacting productivity, profitability, sales growth, and survival.

Using in-depth assessments of CEOs' life, childhood, etc., Kaplan and colleagues (2008) found that small companies are more likely to succeed when the CEO excels on execution-related measures, such as efficiency and organization, and personality traits, such as being detail-orientated, following through, persistence, proactive, setting high standards, and holding people accountable. Similarly, Graham, Harvey and Puri (2009) examined how personality is related to performance using personality tests administered to CEOs. Their results suggest that CEOs' personality traits are significantly related to corporate policies: Companies with more risk-tolerant CEOs initiate more mergers and more acquisitions, and more optimistic CEOs use more short-term debt than less optimistic CEOs.

Since leadership research suggests that hubris, or overconfidence, is negatively associated with performance, more recent research has been exploring the impact of CEO overconfidence on firm performance. A theoretical paper modeled the degree to which CEOs trade off the ability to coordinate employees' actions (i.e., resoluteness) versus the ability to react to new information (Bolton, Brunnermeier & Veldkcamp, 2008). The authors posit that CEOs vary in their degree of resoluteness, which they define as overconfidence. Their model proposes that overconfident CEOs succeed by enabling increased coordination, which ultimately outweighs the costs of only partially reacting to new information.

Additionally, hubristic or overconfident CEOs are prone to pay higher than justified premiums in corporate acquisitions because of their strong beliefs that they will achieve extraordinary economic success (Hayward & Hambrick, 1997). Malmendier and Tate (2005, 2008) also investigated the effect of CEO overconfidence on firm strategies. Their research suggests that overconfident CEOs are more likely to make investments, including negative ones, and are 65% more likely to make acquisitions. Other studies suggest that overconfidence in CEOs is associated with lowered use of discount rates, higher investment, more debt-use, decreased likelihood of paying dividends, higher likelihood of repurchasing shares, and proportionally higher use of long-term, rather than short-term, debt (Ben-David, Graham, Harvey, 2007).

These studies signal how a CEO's personal style can influence corporate policies and performance using a variety of methods, ranging from computer generated models and surveys to in-depth interview assessments. Indeed, CEO personality characteristics are reflected in the strategies, structure, and performance of the organizations they lead (Hambrick & Mason, 1984; Schein, 2004; B. Schneider, Goldstein, & Smith, 1995). Unfortunately, some of these methods are difficult to implement on large scale samples for a number of reasons. For instance, in-depth interviews are likely unfeasible in large samples. Although very thorough and insightful, this method is time consuming and difficult to implement with a large number of CEOs. Another problem involves accessibility to CEOs in general, particularly those of large corporations. CEOs of larger firms might not have the time or willingness to engage in in-depth interviews. Further, interviews, in general, are reliant on experimenter questions and dependent on what is extracted as meaningful.

Surveys and personality tests, on the other hand, are beneficial in the sense that they are far less time consuming and more easily implemented on a wide scale. Although past research has demonstrated that self-reports are predictive of actual behavior (Fleeson & Gallagher, 2009), it is important to be mindful of potential biases associated with them (Schwarz, 1999). When people complete surveys, they may intentionally or unintentionally self-enhance particular things or present themselves in a more positive light. Finally, similar to issues with interviews, surveys and personality tests are constrained to experimenter defined

numerical value judgment and traits. Despite potential drawbacks in these methods, important findings have been drawn using them -- namely, that characteristics and traits that influence a CEO's personal style can impact company performance. CEOs' personal styles are evident not only in their performance, but also in their relationships and communication with people internal and external to their company. One of the most widely investigated "personal styles" in leadership, and more specifically CEO literature, is charisma.

CEO Performance and Charisma

As reviewed above, charisma, as a marker of personal style, has been positively associated with positive dynamics between the leader and the follower, as well as subjective indicators of leader effectiveness/performance. Research examining the relationship between charisma and objective indicators of leadership performance, such as firm profit, is less abundant (e.g. Geyer & Steyrer, 1998). Charisma has also been linked to CEO performance. CEO charisma can lead to firm success through relationships within and outside the firm, such as with share holders or analysts (though research on the latter is sparse). For instance, research suggests that under perceptions of environmental uncertainty, charismatic CEOs contribute to return on sales growth, an internal indicator of firm performance (Waldman, Ramirez, House, & Purunam, 2001). In addition, studies found that under conditions of environmental uncertainty,, gauged using top managers perceptions of political and market uncertainty, charismatic CEOs outperform other CEOs on share-holder returns, an external

indicator of firm performance (Tosi, Misangyi, Fanelli, Waldman, Yammarino, 2004). In both of these studies, charisma was measured using surveys completed by top management team.

Research by Flynn and Staw (2004) corroborate both of these findings using a different method of identifying charismatic CEOs. Specifically, they searched for CEOs that had been labeled charismatic, visionary, etc. by previous journal articles and textbooks. They found that internal (return on sales) and external (shareholder returns) indicators of firm performance are higher in firms with charismatic CEOs. Thus, charisma can contribute to both internal and external indicators of company performance.

Additional research on charisma invokes the myth of the minotaur, suggesting that the CEO is the hero who annihilates the unpredictability of the stock market. As implied by the quote below, charisma is largely viewed as a communication style:

In a way, a charismatic CEO is today's Theseus: by controlling investor perceptions, charisma regulates the ambiguity of stock evaluation. CEO symbolic charisma impacts organizations internally and externally and impacts financial analyst evaluations… Informational intermediaries such as analysts are a crucial link between charismatic discourse and stock prices: as witnesses and joint authors, they confer or deny legitimacy to the CEO, thereby transmitting his influence to, or modifying his influence on, the stock market. The use of prototypical imagery and emotional language are also central elements of the

process. By projecting prototypical personae and articulating emotional rhetoric, executives mobilize and orient the attention of external audiences toward certain aspects of their actions and far away from others (Eccles and Nohria 1992; Elsbach 1994; Wasiliewski 1985). (Fanelli & Grasselli, 2006, p. 16)

As demonstrated by this quote and the central tenets of Charismatic Leadership Theory that were discussed in preceding sections, the ability to effectively communicate and influence people within and outside the firm is the key to effective CEO leadership and effective leadership more broadly.

Although research on charisma and CEOs is promising, this construct is subjectively constructed and suffers from experimenter defined traits and characteristics. Currently, experimenters define charisma using communication that is deemed as charismatic. Charisma is typically subjectively coded based on perceptions of inspirational framing and degree of rhetorical devices, which serve to strengthen the emotional appeal and validity of a speech. For example, researchers have focused on prototypical imagery and emotional language (in Fanelli & Grasselli, 2006, p. 16) and emotionally expressive, confident, and optimistic communication style (Weber, 1925/1968). The vague and subjective nature of previous charisma/leadership research signals the need for other techniques that can assess CEO characteristics, underlying CEO factors, and communication that might be associated with company performance.

Taken together, research on charisma suggests that CEOs gain influence by speaking in ways that inspire and excite people internal and external to the

company. As demonstrated in previous sections, CEOs have a large impact on firm performance and the degree and direction of impact is influenced by various characteristics, traits, and personal styles, which are presumably reflected in communication styles. Indeed, communication style has been associated with various dimensions (i.e., personality, charisma) associated with leadership performance and has been identified as a key feature of leadership.

Whether the format is written statements or speeches directed towards the public, CEOs express themselves through words in virtually every aspect of their lives. Thus, one would expect that language used by CEOs might be associated with characteristics, personality traits and communication skills that play an integral role in how they are perceived as well as their influence within and outside the company. As discussed above, one of the possible candidates is the use of positive emotion words, since researchers agree that positive emotions play an important role in the charismatic leadership process.

Higher Order versus Lower Order Language Style Analysis

Communication is very important in the context of leadership. However, how does one capture the essence of communication? Communication can entail tone, rhetorical devices (e.g., metaphors), content words (e.g., nouns and verbs), and style or function words (e.g., pronouns, prepositions). Higher order approaches involve content coding of aspects of speech, such as metaphors and tone, and therefore require human training and time. Lower order approaches to language analysis, on the other hand, generally involve measuring the frequency

of single words and word categories and are less time intensive because they can be easily automated. More important however, is what words are important to count and use as diagnostic tools.

Advances in text analysis have also allowed researchers to explore which features of language may be most diagnostic for understanding social processes. Historically, language researchers have generally focused on content-heavy words: nouns, adjectives, and regular verbs. Content-heavy research can be conducted by human coders as well as automated computer programs. This, of course, makes sense when trying to understand the content of what people are thinking or saying. Content words can hint at the general tone of the conversation as well as the conversation topic.

The most commonly used text analysis program in leadership/management research is DICTION (Hart, 2000). This text analysis program was designed to reveal subtle difference in word choice (i.e., tone) by counting words assigned to theoretically-based linguistic categories. Style related categories include optimism, pessimism, and activity. For example, the optimism category consists of words such as praise, satisfaction, and inspiration (Hart, 1984, 1987, 2000a, 2000b, 2001).

A more subtle aspect of conversations includes the function words used within a conversation. Recent work is finding that the more common but often-forgettable "function" words – such as pronouns, prepositions, articles, and auxiliary verbs – can reflect psychological states. On their own, function words do

not convey specific meaning. Instead, they can clarify the meaning within phrases and sentences and can serve as conversational placeholders of information shared by the interactants. As markers of linguistic style, function words have been shown to reflect emotional states, personality, and other features of social relationships (see Chung & Pennebaker, 2007). Although there are fewer than 500 function words in English, they typically account for approximately 55 percent of the words we use in speaking or writing.

Function words are spoken very quickly (Van Petten & Kutas, 1991). Individuals have virtually no memory of function words used by themselves or other speakers during conversations. These words are not consciously used or processed; however, previous research has found that function words are associated with various psychological states.

Linguistic Inquiry and Word Count, another text-analytic approach, counts both content and style words (Pennebaker, Chung, Ireland, Gonzales, & Booth, 2007). This program was developed by having groups of judges evaluate 2,000 words and word stems and place them into numerous categories. Categories include positive emotion words (*happy*, *laugh*), negative emotion words (*sad*, *cry*), function word categories (e.g., pronouns, articles, prepositions), as well as various content categories (e.g., achievement, occupation).

In analyses of thousands of natural conversations, the most commonly used function word category is the pronoun. In talking, personal pronouns account for approximately 14 percent of all the words people use (Pennebaker et

al., 2007). Perhaps more than any other type of word, pronouns are quintessentially social. The words themselves refer to human beings. Whether reflecting self-attention (*I*, *me*), group identity (*we*, *us*), or attention to others (*you*, *she*, *they*), when speakers invoke a personal pronoun, the conversational topic is implicitly or explicitly social. Thus, it seems that style words, in addition to content words, might play an important role in effective leadership communication. The following sections will summarize research using the various language analysis techniques, described above, to detect CEO performance, beginning with content word based approaches and ending with function word based approaches.

Higher Order Style Approaches

Research conducted on how CEOs influence others has primarily used higher order style approaches. In trying to identify influential methods of speaking, researchers have focused on charisma. Out of the eleven different styles that have been distinguished that contribute to a person's communication style (Norton, 1983), charismatic communication styles are characterized as friendly, attentive, dominant and reflective (Holladay & Coombs, 1994).

Charisma and communication style have also been assessed using three known charismatic CEOs: Anita Roddick (The Body Shop), Jan Timmer (former CEO of Philips) and Matthew Barrett (Bank of Montreal). Speeches of these three CEOs of international corporations were manually content coded for metaphors, contrasts, three-part lists, puzzles, and alliteration. Results suggest an increased

use of these dimensions increases the impact of their message and is characteristic of charisma (Den Hartog & Verburg, 1997). Thus figurative speech can be beneficial for CEOs impact on the company. Although previous research has identified influential language such as metaphors and alliteration, easier and more automated methods of detecting influential language would reduce time and human training necessary to provide such insights.

A study by Fanelli, Musangyi, and Tosi (2008) examined CEOs' charismatic vision (CCV), and by extension CEO effectiveness. First letters written to shareholders by newly appointed CEOs were analyzed using thematic text analysis. DICTION, an automated text analysis software, was used to assess these themes (Hart, 2000). Charismatic vision was assessed using three nodes or themes: 1) assessment of past, 2) plans for the future, and 3) shareholders, employees, and organizational capabilities (SEOC). Concrete terms or words representing these nodes were created using previously validated dictionaries and using some terms obtained inductively by searching a sample of letters to the stockholders. These three nodes were constructed to capture various aspects of charisma, including evaluation of the status quo (past), formulation and articulation of goals (future), and means to achieve the vision (SEOC). Results indicate that variance in analysts' recommendations was smaller when CEO visions were more charismatic. This suggests that CCV is related to the individual and collective judgments of securities analysts via favorable analyst stock recommendations and uniformity across analysts. CCV also adversely affects

analysts' forecasts of future company performance, leading to more forecast errors, or extreme judgments, both positive and negative, especially with less skilled analysts.

Higher order style approaches signal a link between use of language and influence or charisma. This bolsters the notion that language can serve as an unobtrusive proxy for underlying CEO factors and other characteristics associated with effectiveness. However, higher order style approaches are not ideal for they require time-intensive human training and content coding. Automated text analysis methods that process language and text more efficiently and objectively can enhance our understanding of language associated with effective leaders.

Lower Order Style Based Approach

Research using computerized text analysis has been conducted to examine language use in the context of changes in the economic environment (Bligh & Hess, 2007). Degree of certainty, optimism, pessimism, immediacy, and activity in CEO Alan Greenspan's language was evaluated using DICTION (Hart, 2000). Language was analyzed during the National Bureau of Economic Research (NBER) recession in 2001, following the 9/11 terrorist attacks, and during the bull market, or a time in the stock market before the general economy shows clear signs of recovery. The results reveal three main patterns: During economic good times, the chairman spoke with more certainty and used more words related to activity. On the other hand, economic down times diminished use of certainty and activity words and increased use of jargon, pessimism, and immediacy.

Using DICTION, optimistic and pessimistic tone in earnings press releases have also been linked to performance on the stock market (Davis, Piger, Sedor, 2008). Specifically, optimism is positively associated with future return on assets (ROA) and market response. Pessimistic tone, on the other hand, is negatively associated with future ROA. This suggests that CEOs' use of positive and negative tone in earnings press releases can provide investors with information about future company performance. These studies provide evidence that automatic computerized text analysis can tap into linguistic styles associated with leader performance without labor-intensive content coding.

LIWC and Leadership/Leadership Effectiveness

Research by Yadav and colleagues (2007) explored how linguistic style might be associated with performance. Their paper suggests that a CEO's attentional focus has a direct positive effect on innovation within a company. Letters to share holders from retail banking companies were examined for degree of future focus, as gauged by the use of the word "will," using Linguistic Inquiry and Word Count (LIWC; Pennebaker, Booth, & Francis, 2007). The study found that more future focus is associated with quicker detection of technological opportunities, quicker development of products using these technologies, and quicker deployment of these products. This paper provides evidence for the idea that simply looking at word categories, such as future focus, using LIWC can shed light on the effectiveness of a CEO. These studies point to the importance of using lower order style approaches in studying CEO communication. In addition

to the previous language categories examined, other categories of words that might be associated with status and effective leadership and can be automatically measured are function words.

Function Words and Leadership Effectiveness

In general, how individuals use language has been found to reflect personality, social dynamics, social status, and various features of social relationships (see Chung et al, 2007), and thus has the potential to reflect CEO effectiveness. The ways in which people talk or write provide a great deal of information about their backgrounds, roles, and, by extension, their status. For example, misuse of words, or errors in grammar and spelling can hint at people's education. Additional reflections of status can be seen in what people talk about (i.e., linguistic content) as well as how they talk (i.e., their linguistic style).

Various authors have discussed the presence of status markers in daily language. Lakoff (1975), for example, argued that powerful speech differs from powerless speech with the latter using more frequent tag questions (e.g. "It is…, isn't it?), more intensifiers (e.g. really, so), and more hedges (e.g. sort of, perhaps, maybe). O'Barr (1982) examined trial transcripts and compared the language of high status (lawyer and judge) versus low status (witnesses and defendants) individuals. Those low in power used more intensifiers (very, really), hedges (sort of, kind of), polite forms (please, thank you) and hesitation forms (um, er). These studies suggest that people in a higher status position differ in terms of their style

of speaking. Perhaps these different styles of speech serve a function and influence leadership effectiveness.

Recent groundbreaking research suggests that markers of linguistic style have the ability to reflect emotional states, personality, and other features of social relationships (Pennebaker, Mehl, & Niederhoffer, 2003). Therefore, these markers of linguistic style, as opposed to linguistic content, may be more reflective of a person's status and their effectiveness as a leader. For example, people who are depressed tend to use a higher frequency of first person singular pronouns than people who are not depressed (Rude, Gortner, & Pennebaker, 2004; Weintraub, 1989). Lab studies wherein people complete questionnaires either with or without a mirror in front of them indicate that self-focus results in increased use of first-person singular pronouns (Duval & Wicklund, 1972). The evolutionary view on depression holds that it is an "involuntary defeat strategy," that results in submissive behavior thereby preventing hierarchical struggles (Sloman, Gilbert, & Hasey, 2003). This suggests that self-focus can function as a submissive strategy, by eliciting submissive behavior.

Various projects have also pointed to indirect status markers in a way that may be consistent with pronoun use. For example, higher rates of "I" words have consistently been found among women (Newman et al, in press; Mehl & Pennebaker, 2003; Pennebaker & King, 1999) and younger people across multiple genres (Pennebaker & Stone, 2003). Similarly, higher levels of achievement motivation as measured by the TAT have been linked to lower "I" use

(Pennebaker & King, 1999). Other perceptions of dominance have also been linked to use of self-referents (i.e. I, me, my; Berry, Pennebaker, Mueller, & Hiller, 1997).

Use of first-person singular has also been linked with narcissism (Raskin & Shaw, 1988). Specifically, narcissistic individuals used a higher rate of first-person singular and a lower rate of first-person plural pronouns. Chaterjee and Hambrick (2007) examined the CEOs' "I" use in interviews, prominence of CEO's photograph in annual reports, the CEO's prominence in press releases, and compensation relative to the second-highest-paid firm executive as markers of narcissism. Findings suggest that narcissism in CEOs is positively associated with strategic dynamism and grandiosity, number and size of acquisitions, and results in extreme and fluctuating performance. Although, narcissistic CEOs have more big wins and losses, their companies do no worse than non-narcissistic CEOs. This study further points to the role of first-person singular pronouns in CEO strategy.

In addition, use of "I" and "you" has been linked with status on internet message boards. Dino et al. (2008) used LIWC to analyze messages between low status and high status members. Low status members used a higher frequency of "I" than higher status members. On the other hand, high status members used a higher frequency of "You." In a related line of research, the use of first person plural pronouns (e.g., we, us, our) has also been linked with emerging status. Using language to predict the emergence of leaders in an on-line community,

Cassell, Huffaker, Tversky and Ferriman (2006) examined youth leadership and community involvement on a virtual forum called the Junior Summit. This forum brought together thousands of young people from 139 different countries to discuss global issues online. Within smaller discussion groups, participants elected leaders after exchanges that occurred online over several months. Those selected as leaders subsequently attended a face-to-face real world meeting. In examining language samples prior to leader election, leaders were found to use more language denoting communication processes and more "we" than non-leaders. This study provides strong evidence for the role of language in predicting who was elected leader.

Additionally, language use has been investigated in the context of cockpit crew communication and performance (Sexton & Helmreich, 2000). Language differed as a function of cockpit position (captain, first officer, or flight engineer) as well as workload. Captains used more words than other members within their crew, particularly during periods of high workload. Furthermore, captains used more first-person plural pronouns (e.g., we, us, our) than first officers and flight engineers. Use of "we" also increased with each flight. Engineers, on the other hand, used a higher rate of large words compared to the rest of their crew. The higher the number of large words used by the engineers, the poorer the performance (as measured by error rates) and communication skills of the entire crew. Interestingly, they also found that use of "we", achievement words (i.e.,

try, effort, goal), and total word count was related positively to performance and communication.

Based on these studies, use of "we" may reflect status and may be an attempt on the part of the leader to increase the perception that the group is cohesive or can work well together. Interestingly, the degree to which "we" usage truly reflects group cohesiveness depends heavily on the situation. For example, if a group member is talking to a non-group member about the group, use of "we" suggests greater group solidarity. During times of crisis, use of "we" has been found to increase. For example, after the World Trade Center attacks in 2011, Mayor Rudolph Giuliani increased in his use of "we." This we was directed towards fellow New Yorkers, thus, was used to unify or promote group solidarity.

In addition, use of "we" is associated with greater problem solving within a relationship discussion (Simmons, Gordon, & Chambless, 2005). Use of "we" in weekly field practicum journals is also positively related to supervisors' ratings of performance (Abe, 2009), suggesting "we" use might be associated with performance in other domains. Furthermore, charismatic/influential leaders "make references to the collective, and use inclusive terms, such as 'we,' 'us,' and 'our' in describing goal and achievement" (Gardner & Avolio 1998, p. 46). This suggests that use of "we" might be linked with leadership effectiveness.

An extensive meta-analysis of five studies, conducted by Kacewicz and colleagues (under review), explored the ways position in the social hierarchy is revealed among individuals in small groups through their natural use of pronouns.

In the first experiment, 4-person groups worked on a decision making task where leadership status was randomly assigned. In Studies 2 and 3, dyads either worked on a task or chatted informally in a get-to-know-you session. Study 4 was a naturalistic study of incoming and outgoing email of nine participants who provided information on their correspondents' relative status. Finally, the last study examined 40 letters written by soldiers in the regime of Saddam Hussein. Computerized text analyses across the five studies found that those people with the highest status consistently used more words, fewer first- person singular, higher first-person plural and second-person singular, and fewer impersonal pronouns. Natural language use during group interaction provided evidence that place in social hierarchy is associated with attentional biases, such that higher rank is linked with focus on others whereas lower rank is linked with focus on the self.

These findings suggest that CEO performance might be associated with self-focus and social connectedness. CEOs with higher power and status may have more influence and thus may be more effective. Indeed, the heightened use of "we" by individuals with higher status is consistent with research that suggests that "we" is linked with cohesiveness, leader election, positive performance, charismatic leadership, and by extension effective leadership, as summarized above.

Additionally, use of positive emotion words has been associated with charismatic/transformational leadership, personality, and leadership more broadly

and thus may also be associated with CEO performance. Researchers suggest that positive emotions and mood contagion are one of the psychological processes linking charismatic leadership with outcomes such as follower satisfaction, motivation, cooperation, and performance (Bono & Ilies, 2006). Positive emotions have also been linked with effective leadership via employee and organizational outcomes such as motivation (Erez & Isen, 2002), creativity, (e.g., George, 1991, 1996; Spector & Fox, 2002), task performance (see Ashby, Isen, & Turken, 1999 for a review), and subjective well-being (e.g., Diener, Oishi, & Lucas, 2003). A relationship between "a happy, cheerful disposition" and leadership was observed in the early 1900s (Bass, 1990). More recently, a relationship was established between extraversion and transformational leadership (Judge & Bono, 2000; Ployhart, Lim, Chan, 2001). Similarly, A meta-analysis found that extraversion and charisma were positively related (Bono & Judge, 2004). These links between extraversion and charismatic and transformational leadership are important because positive emotionality—the experience and expression of positive emotions—is characteristic of an extravert (Watson & Clark, 1997).

The link between positive emotion words and effective leadership is consistent with findings suggesting communication is more effective when it includes emotional appeals (Ray & Batra, 1983). Additionally, emotional appeals are more likely to be attended to, processed, remembered, and evaluated more favorably as compared with messages without emotional appeal (Batra & Ray,

1986; Brown and Stayman, 1992; Ray & Batra, 1983; Stayman & Batra, 1991). This could be partially influenced by emotional contagion/transfer. Emotional contagion research suggests that emotions can be automatically shared or transferred from one individual to another via nonverbal and verbal behavior because people have a natural tendency to mimic the emotional expressions of others thereby potentially leading to emotional convergence (Hatfield, et al., 1993; 1994; Neumann & Strack, 2000).Thus it is possible for a leader/CEO to simulate a "ripple effect" whereby his or her emotional-state is transferred to other individuals, leading to a collective affective tone (Barsade, 2002; Bartel & Saavedra. 2000; Sy, Cote, & Saavedra, 2005).

On the other side of the coin, since emotional appeal has been demonstrated to be associated with leader performance, negative emotion words may be linked with leadership/CEO performance as well. Negative emotion words have been associated with deceptive communication (Newman, Pennebaker, Berry, & Richards, 2003). Researchers have suggested that liars may experience guilt either about lying or about the topic they are discussing (e.g. Ekman, 1985/1992; Knapp & Comadena, 1979; Knapp et al., 1974; Vrij, 2000). Indeed, research suggests that people experience discomfort and guilt while lying and immediately afterward (e.g., DePaulo et al., 2003). Thus, in the context of CEO of leader performance, negative emotion words may be associated with poor performance and leader effectiveness. This is consistent with research linking

pessimistic communication with economic downtimes (Bligh & Hess, 2007) as well as lowered future return on assets (Davis, Piger, Sedor, 2008).

SUMMARY

More broadly, the literature discussed above suggests that together style words and content words might serve as excellent markers of communication associated with CEO/leadership effectiveness. Style words are less easily manipulated than content words, and thus may serve better proxies for underlying CEO characteristics, such as charisma, personality, and CEO effectiveness.

Chapter 2: The Present Study: Predicting Tenure and Company Performance based on Natural Language use in Quarterly Conference Calls

Given the paucity of studies examining how linguistic style reflects and predicts company performance, the overall goal of this study is to determine how language used by CEOs can reflect tenure and assimilation within the company as well as company performance. Previous research on content analysis in strategic management has primarily drawn from textual communications of managers, particularly CEO shareholder letters and annual report texts (Duriau, Reger, & Pfarrer, 2007). The current research expands on this by using existing transcripts from earnings conference calls associated with quarterly reports.

All companies listed on stock markets are required to publically disclose information offered to analysts and investors by the Regulation Fair Disclosure (Regulation FD), which was implemented by the Securities and Exchange Commission (SEC) in 2000 (US Code of Federal Regulations 2000, 17.243). Companies communicate with their investors using quarterly earnings press releases and quarterly earnings announcement conference calls. Earning press releases are written and distributed through online wire services and are available on the company's website. Earnings conference calls, on the other hand, are verbal and available for listening online.

Both of these channels should communicate all of the information related to company performance and guidance on earnings forecasts (Lansford et al., 2009). Thus, the *explicit* information or message content of CEO's communications is broadly available and well-known by investors. In turn, this means that the *implicit*, mainly nonfinancial information conveyed by the CEOs' personal style can play a critical role in company performance (Amir & Lev, 2006). Conference calls generally occur immediately following release of financial information every quarter. This allows CEOs to highlight successes during prosperous quarters and to assuage concerns after a bad quarter. Their style of speaking then, can convey a tone or information, such as CEOs emotional and psychological state, CEO connectedness within the company and more, above and beyond financial indicators

In addition to conveying tone or style, these conference calls are advantageous in that the CEO communicates information to financial analysts through a naturalistic question and answer phase. This structure permits more naturalistic speech than purely textual communication (Duriau, et. al., 2007). Following each conference call, financial analysts forecast stock price and actual stock price is listed 1-3 days after the call. Thus, quarterly earnings conference calls are ideal for answering our research questions because they offer a more naturalistic speech by the CEO and are followed by objective market performance indicators. Analyses will examine these research questions:

Research Question 1: How Does Language Change in the Quarters Preceding an Old CEO Exiting Tenure and in the Quarters Following New CEO Ascension?

Research Question 2: Do CEOs use language differently depending on whether company performance increases or decreases in the year prior to exiting tenure or subsequent to their entering tenure?

Research Question 3: How does old and new CEO language predict financial performance for old and new CEOs and does company performance predict old and new CEO language?

a. Language by performance
b. Lag—language by subsequent performance
c. performance by change in language
d. lag—performance by subsequent language

Based on previous research, I will focus on use of first-person singular pronouns, first-person plural pronouns, and positive and negative emotion words.

Hypothesis 1:

New CEOs will use more first-person singular and fewer first-person plural pronouns in their speech as compared with old CEOs. In addition, use of "I" will decrease over time for new CEOs, and use of "we" will increase, whereas existing CEOs will stay relatively stable over time.

Hypothesis 2:

Lower rates of self-focus, as gauged by use of "I", and higher rates of other-focus, as measured by higher use of "we" and "you" will be positively associated with performance as gauged by Earnings per Share (EPS). Low self- focus and high social connectedness is linked with being higher within the social hierarchy, thus a more effective CEO might exhibit this pattern of language use.

Hypothesis 3:

Higher rates of positive tone and lower levels of negative tone – as measured through the use of positive and negative emotion words – will be positively associated with performance as measured by EPS.

To address these questions, we will use a naturalistic longitudinal data source – transcripts associated with quarterly earnings conference calls for 215 companies. These transcripts contain both the prepared speeches and question and answer portions by the company CEO. Text from transcripts will be extracted to allow analysis of CEO speech in the question and answer portion. Financial performance indicators of each company will be collected for each quarter.

Chapter 3: The Conference Call Transcript Corpus and Sample

The goal of this dissertation was to examine how language is associated with an previous CEO exiting tenure, a new CEO entering tenure, and finally with company performance. In order to accomplish these goals, a sample of quarterly conference call transcripts was selected from the archives. In the conference call transcripts, LIWC was used to assess word categories in the conference call transcripts associated with leadership and leadership performance, such as self-focus, other-focus, and emotional expression. These constructs were examined in CEO speech within the prepared portion and the question and answer portion of quarterly conference calls across one year (4 transcripts) either prior to departure or subsequent to entering tenure. In addition, financial performance (Earnings Per Share) was used to assess how language predicts company performance.

QUARTERLY CONFERENCE CALL CORPUS

Company earnings conference call transcripts were downloaded from the Compustat North America database, beginning with the S&P1500 firms available. The sample was restricted to include only those companies for which there was a new CEO after 2001 and prior to 2007, which yielded 495 firms. A master spreadsheet was created containing rows for every quarter for every company. Thus, there were multiple rows for each company. Each row includes transcript name, date, quarter, CEO name, and an indication of whether the CEO was entering or exiting. In addition, we obtained some information on CEOs such as

length of time in company prior to appointment as CEO (if any) and length of tenure as CEO.

Speech Extraction

CEO speeches were extracted manually. CEO name was identified prior to extraction and this was used to locate speech segments within the transcript. For each transcript the CEO speech segment was copied and pasted into blank text file. Text files were named using the company name, the date, and type of speech.

Out of the 495 firms, we selected only those firms with at least 3 transcripts within the year prior to departure for the old CEO and 3 transcripts within the year subsequent to initiating tenure for the new CEO. These transcripts had to be complete meeting the following criteria

a. CEO was present on call
b. Word count exceeded 50 words per speech

Using this criteria, we were left with 215 companies, representing over 10 different industries (based on 3-digit SIC codes).

Each transcript contains speeches prepared by the current CEO and members of the top management team (TMT) as well as a question and answer (Q&A) session in which the CEO and members of TMT answer questions posed by financial analysts. Thus, the Q&A session represents a slightly more naturalistic form of speech. For our purposes we are primarily interested in the Q&A portion of the transcript for CEOs.

Financials

Earnings per share (EPS) was used to assess company performance. EPS is a traditional accounting indicator of internal company performance that is often used by analysts and investors to assess the future value of the firm. It is one of the single most important variables in determining a share's price, as it is the most visible aspect of corporate performance and the one that virtually every CEO tries to enhance. Share price performance essentially reflects the investment community's verdict on how well management is doing. Thus, previous research examining performance has used this as a performance indicator (Davis & Daley, 2008; Schneider, Hanges, Smith, & Salvaggio, 2003; Welbourne & Cyr, 1999)

EPS per quarter was downloaded from the Wharton research data services (WRDS) for companies and years of interest. For our data set, there were 12 missing EPS financials. The average EPS across companies and CEOs was .29 (*SD = .95)*. The average EPS for exiting CEOs was .32 (*SD = .79)* with a range of -13.25 to 7.21 (20.46 range). New CEOs average EPS was .26 (*SD = 1.10)* with a range of -16.58 to 5.83 (22.41*).* A t-test was conducted to examine whether EPS differed significantly between old and new CEO and results suggest no significant difference $t(215) = 1.38$, $p > .15$. However, more important, as you can see, companies spanned a wide range of financial success and were representative of S&P1500 companies at the time of data collection.

Gender and Age

Demographic information was available for all CEOs in our sample. Out of 430 total CEOS (old and new) 422 were males (98.14%). Gender distribution was equal for old and new CEOs with 4 female CEOs for each respectively.

The average age for old CEOs was 58.00 (*SD* = 7.29) years old and the average age for new CEOs was 51.40 (*SD* = 6.18) years old (see Figure 2).

Figure 1: Histogram of Age at Beginning of Last Year of Tenure for Old CEO

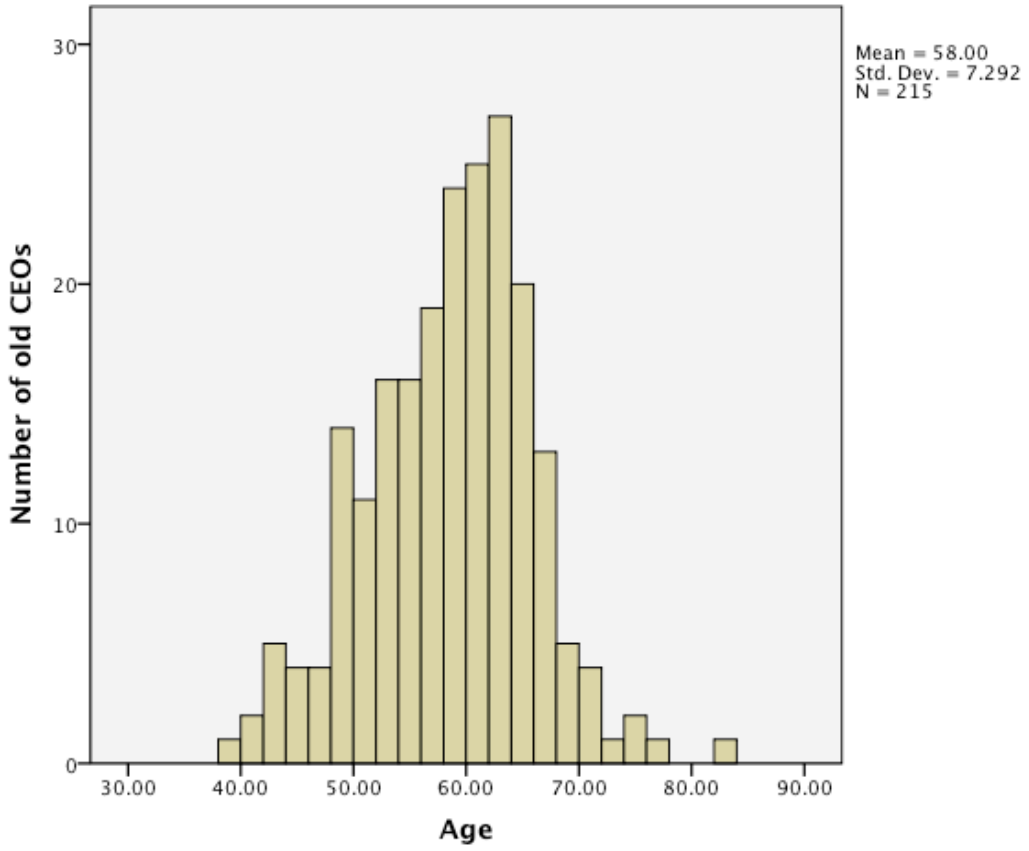
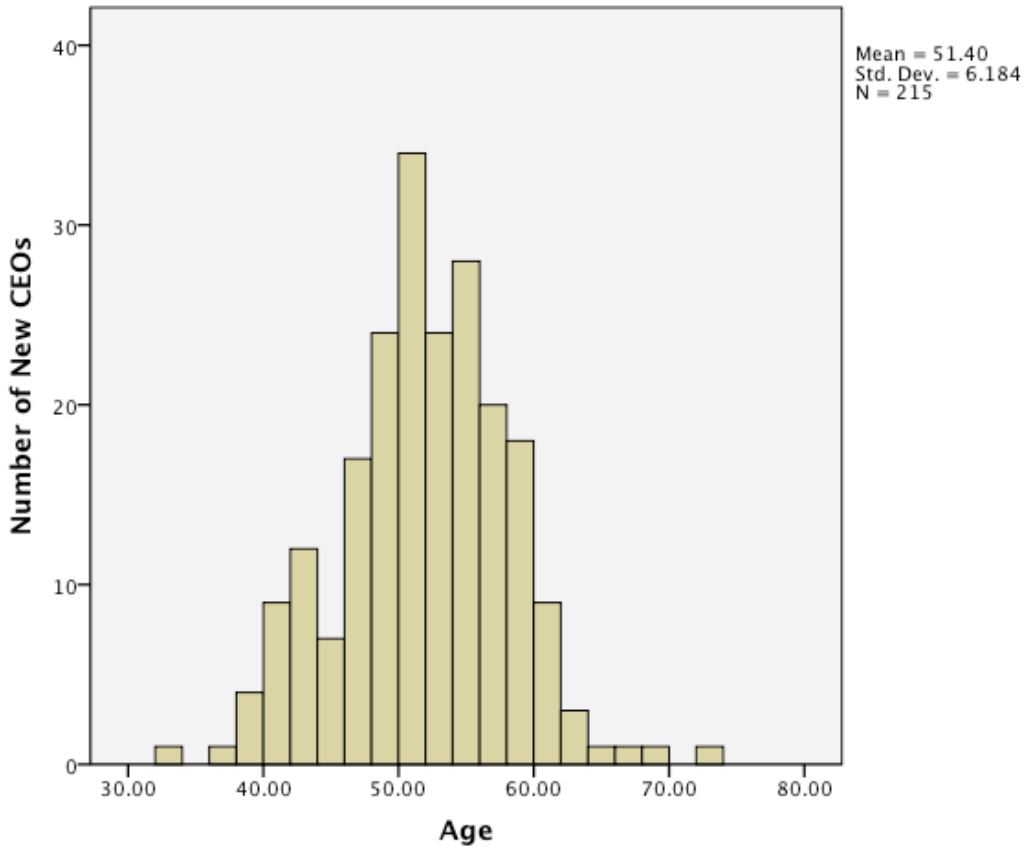


Figure 2: Histogram of Age at Start of Tenure for New CEO



Word Count

The mean number of words used by old CEO in the question and answer portion was 1590.37 (*SD* = 1186.71). New CEOs used a mean of 1777.07 (*SD* = 1114.18) words for the question and answer portion.

SUMMARY

Overall, the descriptives of the data set showed that our sample of conference calls spans a wide range of quarterly financial success as well as industries. EPS did not differ based on CEO type. In addition, on average, exiting CEOs were older than new CEOs in our sample.

Chapter 4:

Research Question 1: How does language change in the quarters preceding CEO exiting tenure and in the quarters following new CEO ascension?

Data Analysis

The goal of this research question was to explore the pattern of language-use in the last year of the exiting CEO's tenure and the first year of the new CEO's tenure. In addition to identifying patterns, we also wanted to explore whether language patterns used by exiting CEOs in their last year differed significantly from the language patterns used by new CEOs in their first year of tenure.

A repeated measures analysis of variance (ANOVA) using language from the question and answer portion for old and new CEO across the four quarter were used as within subject variables. Relevant language variables—first-person singular pronouns, first plural pronouns, positive emotion words, and negative emotion words—were used as the dependent variables. Tests of within subject contrasts were conducted along with the repeated measures ANOVA to examine the exact nature of the relationship between language and time.

RESULTS

First-Person Singular

We examined use of first-person singular in the last year of exiting CEO's tenure and in the first year of a new CEO 's tenure. The results of the 2 x 4 repeated-measures ANOVA yielded no main effect of CEO; however, there was a main effect of quarter ($F(3, 639) = 7.31$, $p < .001$) and an interaction between CEO and quarter ($F(3, 639) = 6.35$, $p < .001$).

Tests of within-subject contrasts yielded a linear main effect for quarter ($F(1,213) = 9.66$, $p = .002$), a quadratic main effect of quarter, and a linear interaction between CEO and quarter ($F(1, 213) = 13.00$, $p < .001$). As evidenced by the graph below, new CEOs seemed to be driving the majority of these contrast effects, thus contrasts were run separately for old and new CEOs. Indeed, there were no significant contrast effects for old CEOs while there was a linear main effect $F(1, 214) = 25.00$, $p < .001$) and a quadratic main effect ($F(1, 214) = 14.15$, $p < .001$) for new CEOs.

As displayed in Table 1, relative to old CEOs, new CEOs began their term with an elevated use of *I* and then decreased substantially in quarter 2 and 3 before increasing again in quarter 4, thus explaining both the significant linear and quadratic effects. Old CEOs had minor fluctuations in I-use, as exemplified by the null main effects of contrasts.

Figure 3: Graph Comparing I-use Across Quarters for Old and New CEO in Q&A Speech

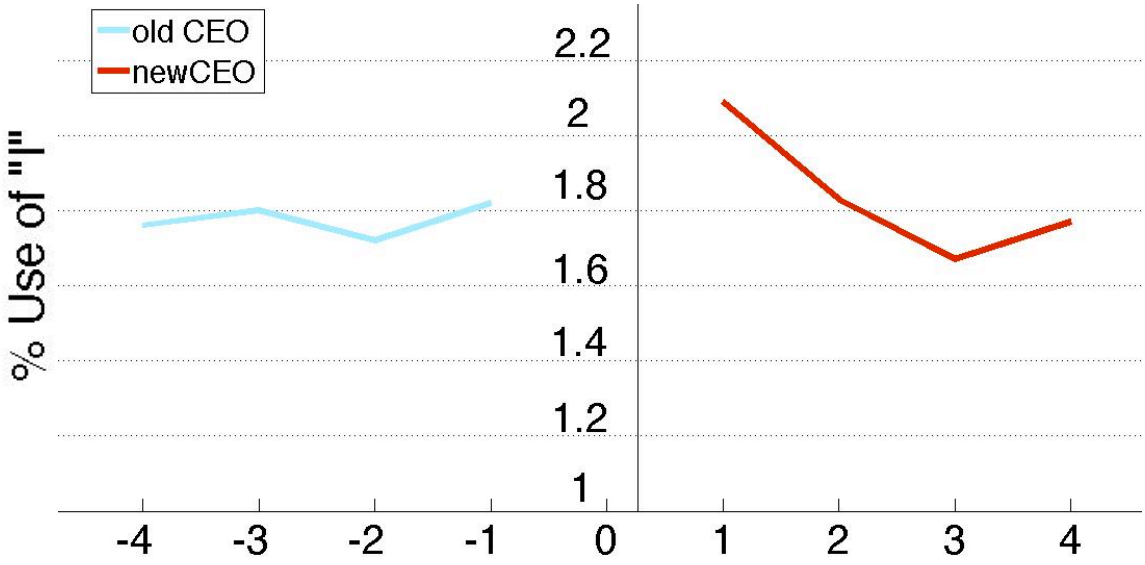


Table 1: Means for I-use across quarters for Old and New CEO

CEO	**Quarter 1**	**Quarter 2**	**Quarter 3**	**Quarter 4**
OLD				
Mean	**1.76**	**1.80**	**1.72**	**1.82**
SD	*0.78*	*1.09*	*0.79*	*0.98*
NEW				
Mean	**2.09**	**1.83**	**1.67**	**1.77**
SD	*1.11*	*0.82*	*0.78*	*0.73*

Note: Although sphericity was violated, we checked the lower bound reported by SPSS, or worst possible scenario because it adjusts the degrees of freedom used to determine the significance (F-crit), and it was still significant for both the main effect of quarter and the interaction between CEO type and quarter. Additionally, analyses were conducted controlling for tenure in company before becoming CEO as well as CEO tenure. There were no differences in means and the F-values were actually larger.

Discussion

New CEOs high initial use of "I" potentially reflects attention to the self (Duval & Wicklund, 1982) as well as a lack of assimilation in their role within the

organization. Entering a new role engenders a degree of uncertainty. Consistent with this, as the quarters progress, new CEOs decrease in their use of "I," suggesting they are assimilating within their company.

First-person plural

We also examined CEOs' use of first-person plural "we" as they exited tenure and new CEO's use of "we" as they entered tenure. The results of the 2 x 4 repeated-measures ANOVA yielded a main effect of CEO ($F(1, 213) = 15.14$, $p < .001$) and no main effect of quarter. Tests of within-subject contrasts yielded a linear main effect for CEO ($F(1, 212) = 17.07$, $p < .001$) and a marginally significant linear main effect of quarter ($F(1, 212) = 2.81$, $p = .095$). As displayed in figure 5 and supported by the repeated measures ANOVA, old and new CEOs displayed different trends for use of "we." Thus linear contrasts were run separately for old and new CEO. Indeed, there were no contrast main effects for old CEO, but there was a linear main effect for quarter for new CEO ($F(1, 213) = 3.19$, $p = .076$).

New CEOs used a higher percentage of "we" than old CEOs. In addition they increased their use of "we" at a linear rate over time. Old CEOs, on the other hand, exhibited minor fluctuations in their use of "we", but nothing noteworthy.

Figure 4: Graph Comparing We-use Across Quarters for Old and New CEO in Q&A Speech

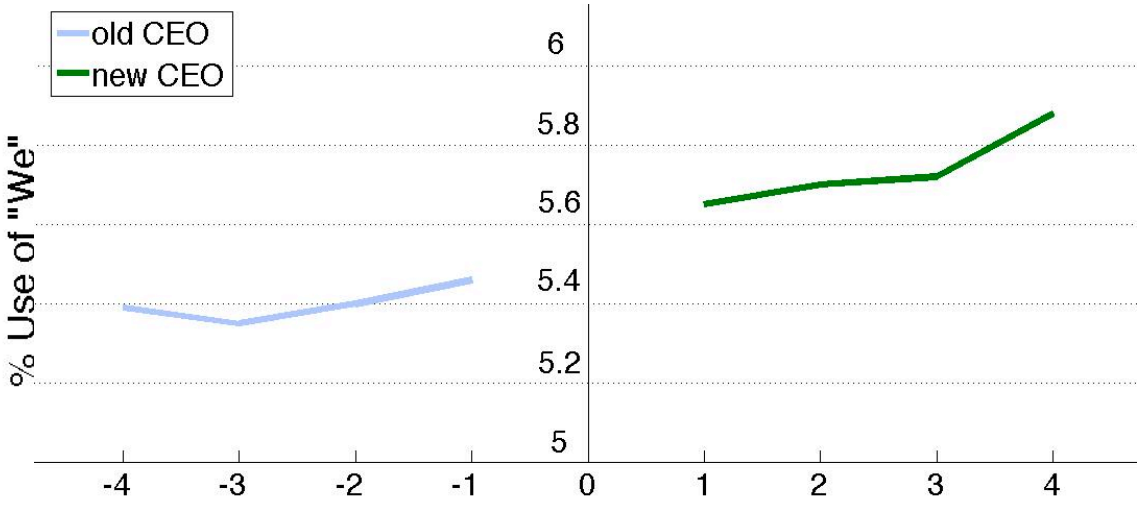


Table 2: Means for we-use across quarters for Old and New CEO

CEO	Quarter 1	Quarter 2	Quarter 3	Quarter 4
OLD				
Mean	**5.39**	**5.35**	**5.40**	**5.46**
SD	*1.39*	*1.45*	*1.39*	*1.50*
NEW				
Mean	**5.65**	**5.70**	**5.72**	**5.88**
SD	*1.63*	*1.33*	*1.51*	*1.33*

Note: Although sphericity was violated, we checked the lower bound reported by SPSS, or worst possible scenario because it adjusts the degrees of freedom used to determine the significance (F-crit), and it was still significant for the main effect of CEO. Additionally, analyses were conducted controlling for tenure in company before becoming CEO as well as CEO tenure. There were no differences in means or size of F.

Discussion

New CEOs used a much higher rate of first-person plural as compared with old CEOs, perhaps signaling an effort to convey connectedness within their respective companies, as well as an actual attempt to assimilate into their new role within the company. New CEOs higher use of "we" may also attempt to rally the

troops to embark on this new journey. In addition, new CEOs may actually *feel* higher status than exiting CEOs. Since information on why old CEOs are exiting is not readily available, it is difficult to discern whether this is the case. True assimilation is reflected in the marginal increase in new CEOs use of "we" from quarter 1 to quarter 4 ($F(1, 214) = 3.38$, $p = .068$). Over time, as new CEOs get accustomed to their role and place within the company they begin to use a higher rate of first-person plural pronoun, which reflects connectedness within a group. Old CEOs on the other hand, use a substantially lower percentage of "we" and do not fluctuate substantially in their use. Since, they are presumably already assimilated/connected with the company, their use of "We" is below new CEO and stays roughly similar in their last year as CEO. On the other hand, they may be distancing themselves because they know they'll be leaving.

Positive Emotions

Positive emotion words were examined as CEOs exited and entered tenure. The 2x4 repeated measures ANOVA yielded a main effect of CEO type ($F(1, 213) = 10.05$, $p = .002$), a main effect of quarter ($F(3, 639) = 3.65$, $p = .012$), and a significant interaction between CEO type and quarter ($F(3, 639) = 5.08$, $p = .002$).

Within subject contrasts were conducted to examine the nature of the pattern of positive emotion word use. Results yielded a linear main effect for CEO ($F(1,213) = 10.05$, $p = .002$), a quadratic main effect for quarter ($F(1, 213) = 9.15$,

p = .003), and an interaction between CEO and quarter ($F(1, 213) = 13.66$, p = .001). Since new and old CEO patterns of positive emotion words differed, we ran contrasts separately for old and new CEO to disentangle whether CEO type was driving some of the significant effects. For old CEO, there was a linear main effect for quarter ($F(1,213) = 7.64$, p = .006). Consistent with figure 6, old CEOs displayed a linear pattern in their positive emotion word use in the year prior to their exiting tenure. As their tenure neared an end, old CEOs increased in their use of positive emotion words. For new CEO, there was both a marginally significant linear main effect of quarter ($F(1,214) = 3.03$, p = .083) and a significant quadratic main effect of quarter ($F(1,214) = 8.56$, p = .004). New CEOs' use of positive emotion words exhibited a quadratic pattern—an elevated use of positive emotion words in the first quarter, followed by a decline in the second quarter, and then an increase in the 3rd and 4th quarter.

Overall, new CEOs used a higher percentage of positive emotion words than old CEOs. This difference was most pronounced between the beginning of new CEOs' term when their use of positive emotion words in the question and answer portion was the highest and the beginning of the old CEOs last year when their positive emotion word use was at the lowest. New CEOs started with an elevated rate and then decreased in quarter 2 and then stabilized. Old CEOs last year began with a lower amount of positive emotion words and then increased substantially their tenure came to an end ($F(1, 213) = 7.38$, $p = .007$).

Figure 5: Graph Comparing Positive Emotion Word use Across Quarters for Old and New CEO in Q&A Speech

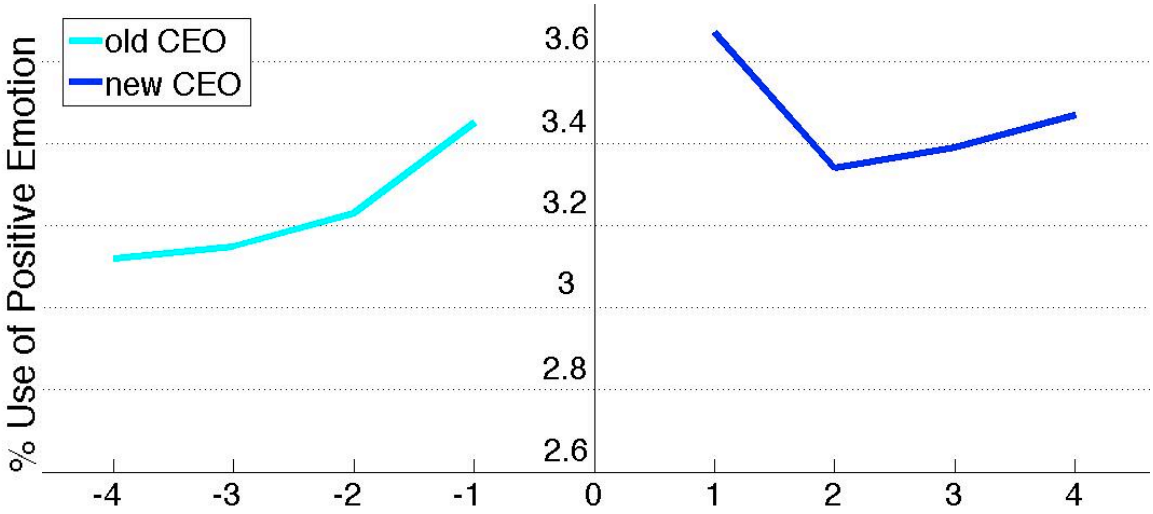


Table 3: Means for positive emotion word use across quarters for Old and New CEO

CEO	**Quarter 1**	**Quarter 2**	**Quarter 3**	**Quarter 4**
OLD				
Mean	**3.12**	**3.15**	**3.23**	**3.45**
SD	*1.05*	*1.03*	*1.34*	*1.57*
NEW				
Mean	**3.67**	**3.34**	**3.39**	**3.47**
SD	*1.39*	*0.86*	*1.02*	*1.21*

Note: Although sphericity was violated, we checked the lower bound reported by SPSS, or worst possible scenario because it adjusts the degrees of freedom used to determine the significance (F-crit), and it was still significant for the main effect of CEO, marginally significant for main effect of quarter, and significant for the interaction between CEO type and quarter. Additionally, analyses were conducted controlling for tenure in company before becoming CEO as well as CEO tenure. There were no differences in means or size of F.

Discussion

Since emotional appeal has been associated with various components of effective leadership as well as environmental circumstances—economic up and

down swings, etc.— we suspected potential differences in use based on CEO type (old or new). Interestingly, new CEOs used more positive emotion words than old CEOs. This difference was most pronounced at the beginning of their tenure. Positive emotional appeal has been linked with charismatic, transformational, and effective leadership as well as performance, suggesting that new CEOs are using positive emotion words in effort to convey good leadership or project a certain reputation or image. Interestingly, the high positive emotion word usage decreases and then levels off in new CEOs' first year. This is consistent with research pointing to the difficulty associated with executive role transitions – the amount of time it takes a leader to become productive, assimilate into a new role and begin generating expecting results (Levine, 2010). Thus, a new CEO may begin with an elevated use of positive emotion words to convey their excitement and make a good first impression, but then the realities and difficulties associated with the job emerge, resulting in lowered positive emotion words.

Old CEOs, on the other hand, began their last year of tenure with substantially fewer positive emotion words than new CEOs and then increase linearly as they end their tenure. There could be a two-fold meaning for use of positive emotion words for old CEO depending on the reason behind ending their tenure. This may be an attempt to convey positive hopes for the company and/or excitement at the opportunity to embark on a new journey. In addition, regardless of the reason for ending their reign (fired, resigned, retired, etc.), perhaps the increase in positive emotion words reflects Old CEOs coming to terms with their tenure coming to an

end. Indeed, these findings mirror research that suggests that people tend to have a positivity bias for end experiences (O'Brien & Ellsworth, in press)

Negative Emotions

Finally, we examined use of negative emotion words in the year preceding old CEOs exiting tenure and new CEOs entering tenure. The 2 x 4 repeated measures ANOVA yielded a main effect of CEO ($F(1,212) = 11.88$, $p = .001$). Specifically, old CEOs use negative emotion words at a higher rate than new CEOs. In addition, CEOs use of negative emotion words exhibited a linear trend ($F(1, 212) = 11.88$, $p = .001$).

Figure 6: Graph Comparing Negative Emotion Word use Across Quarters for Old and New CEO in Q&A speech

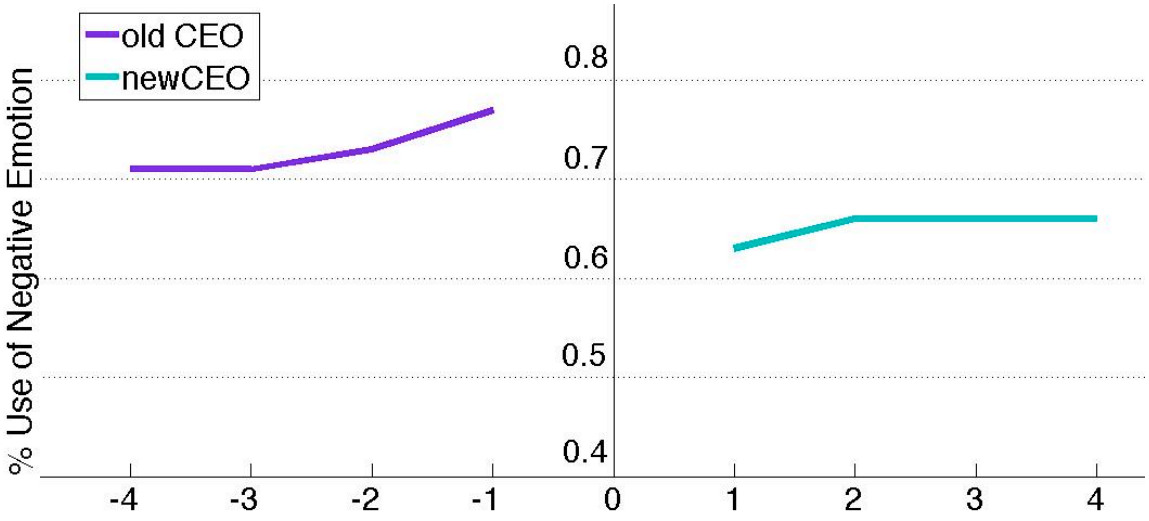


Table 4: Means for Negative Emotion word use across quarters for Old and New CEO

CEO	Quarter 1	Quarter 2	Quarter 3	Quarter 4
OLD				
Mean	**0.71**	**0.71**	**0.73**	**0.77**
SD	*0.37*	*0.45*	*0.45*	*0.72*
NEW				
Mean	**0.63**	**0.66**	**0.66**	**0.66**
SD	*0.40*	*0.35*	*0.37*	*0.35*

Note: Although sphericity was violated, we checked the lower bound reported by SPSS, or worst possible scenario because it adjusts the degrees of freedom used to determine the significance (F-crit), and it was still significant for the main effect of CEO. Additionally, analyses were conducted controlling for tenure in company before becoming CEO as well as CEO tenure. There were no differences in means or size of F.

Discussion

Although we did not predict that old CEOs would use a higher percentage of negative emotion words, it is important to consider the fact that the base rate of negative emotion words is very low. Regardless, since old CEOs are on their way out their door, they presumably have more flexibility in the language they use, the way they behave, etc. Old CEOs already have an established reputation within and outside the company, thus their evaluation and performance is less impacted by their use of language. In addition, previous research suggests that truth tellers use fewer negative emotion words. As we have mentioned above, since it is unclear why old CEOs are departing, an elevated rate of negative emotion words may reflect an attempt to conceal the reasons for their departure. It is not uncommon for leaders to be asked to resign, to preserve their reputation, thus use of negative emotion words might be higher in old CEOs because they may reflect

circumstances surrounding their departure.

SUMMARY

In summary, significant patterns of language use emerged in the last year for old CEO and in the first year for new CEO. Results suggest that language use did indeed differ depending on whether a CEO was exiting tenure versus just beginning their tenure. This highlights the importance of exploring language in conjunction with the context within which it arises. These findings also points to the significance of exploring language as a marker of CEOs' psychological states and changing role within the company.

Chapter 5:

Research Question 2: Do CEOs use language differently depending on whether company performance increases or decreases in the year prior to exiting tenure or subsequent to their entering tenure?

Data Analysis

The goal of this question was to explore whether patterns of language differed as a function of increasing or decreasing performance. Companies were designated into companies that decreased or increased in performance in the exiting CEO's last year or the new CEO's first year using an Earning Per Share (EPS) difference score described below. A 1x4 repeated measures ANOVA was conducted separately for old and new CEOs to investigate this research question.

Earnings Per Share

A 2x4 repeated measures ANOVA was conducted to explore whether there were any differences in EPS for old and new CEOs across quarter. Results yielded no main effects or interactions (see table 5 for means).

Table 5: Means for Earnings per Share across quarters for New and Old CEO

EPS	**Qrtr 1**	**Qrtr 2**	**Qrtr 3**	**Qrtr 4**	**Avg**
OLD					
Mean	**0.33**	**0.38**	**0.36**	**0.22**	**0.32**
SD	0.65	0.78	0.58	1.06	0.77
New					
Mean	**0.24**	**0.28**	**0.22**	**0.30**	**0.26**
SD	0.77	0.81	1.31	1.37	1.06

EPS difference score

In order to assess whether language patterns differ depending on performance decreasing or increasing we computed an EPS difference score. This was computed by subtracting the last quarter of the four quarters we have available for each CEO, from the first quarter.

$$EPS_{change} = EPS_{quarter1} - EPS_{quarter4}$$

Companies were dummy coded with 1 indicating increased performance (<=0) and 0 indicating decreased or no change in performance (>1). Data was split using this dummy code and analyses were conducted separately for Old and New CEO.

RESULTS

Results suggest there were no main effects of "company performance" on use of first-person singular, first-person plural, positive emotion words, and negative emotion words for both old and new CEOs.

Discussion

This method of analysis suggested no significant differences in companies that decreased versus increased in performance. However, this measure suffered from multiple weaknesses, including dichotomizing performance. Due to the fact that some business performances are cyclical, this measure might truly insensitive to actual company performance. This measure was a relatively crude way to assess whether language impacted company performance, thus we conducted additional analyses.

Chapter 6:

Research Question 3: Does CEOs use of language predict current or future company performance and vice versa?

Data Analysis

This research question was designed to explore the direction of causality between language and earnings per share (EPS). This was examined using analyses in which language and EPS were lagged across time in addition to non-lagged analysis. Specifically, the four language categories (I, we, positive emotion, negative emotion) were used to predict EPS in the current quarter, as well as in one and two subsequent quarters. Also, EPS was used to predict these same four language categories in the same quarter as well as in one and two subsequent quarters.

Hierarchical linear models were used to test the effect of the 4 designated word categories on EPS while holding time constant. Each of the reported models take into account individual (executive) level variability in mean word usage by including random slopes for each individual. Analyses were conducted separately for old and new CEOs. Language was used as the independent variable and earnings per share was used as the dependent variable. We controlled for the basic time effect, to examine whether language predicted company performance independent of time. Analyses were conducted examining the relationship between the current quarter's use of language on earnings per share as well the

current quarter's language use on earnings per share in the subsequent quarter and two subsequent quarters later (lagged analyses).

RESULTS

Language predicting current quarters EPS

Analyses examining the relationship between the language use and EPS in the same quarter, suggest that use of "I", positive emotion words, and negative emotion words did not predict EPS for old or new CEO. Old CEOs' use of "we" marginally predicted EPS [B = -0.11, SE = .06, $t(214) = -1.82$, $p = .07$] for the same quarter. Specifically, a higher percentage of "we" use predicted a lower earnings per share for old CEO.

Language predicting the subsequent quarters EPS

Lagged analyses, examining how previous quarters' language predicts a subsequent quarters EPS, suggest that multiple language categories predict the subsequent quarters earning per share. Old CEOs use of negative emotion words marginally predicted EPS [B = 0.04, SE = .02, $t(408) = 1.71$, $p = .088$]. Higher use of negative emotion words resulted in a higher EPS in the subsequent quarter for old CEOs. New CEOs use of language, on the other hand, had more significant associations with subsequent quarters EPS. Use of "I" negatively predicted EPS [B = -0.08, SE = .03, $t(211) = -2.32$, $p = .022$]; that is, the higher frequency of "I" used by new CEOs, the lower EPS in the following quarter. In addition, use of "we" by new CEOs positively predicted EPS [B = 0.12, SE = .05,

t(214) = 2.16, *p* = .031] in the following quarter. Thus, the higher the "we" used by new CEOs, the higher EPS in the subsequent quarter.

Language predicting two subsequent quarters EPS

Lagged analyses examining how language predicted two subsequent quarters of EPS was consistent with previous results in that use of "we" by new CEOs positively predicted EPS [B=.10, SE=.06, t(211)=1.69, p=.09]. Thus the higher the use of "We" by new CEOs, the higher the EPS two quarters later.

EPS predicting language

Analyses examining the relationship between EPS and language use in the same quarter suggest that EPS did not predict any language variable for New CEO. However, EPS did predict old CEOs' use of "we" [B=-.03, SE=.02, t(214)=-1.78, p=.08] for the same quarter. Specifically, a higher earnings per share predicted a higher percentage of "we" use for old CEO.

EPS predicting the subsequent quarters language

Lagged analyses were also conducted examining how earnings per share (EPS) predicted language in the subsequent quarter. Although EPS did not predict exiting CEOs' use of language in the subsequent quarter, it did predict new CEOs use of negative emotion words [B=-.39, SE = .15, t(214) = -2.69, *p* = .008]. The higher the quarterly EPS, the lower the use of negative emotions by new CEO in the subsequent quarter.

EPS predicting two subsequent quarters language

The relationship between EPS and language used two quarters later was examined. A higher EPS predicted percentage of negative emotion words two quarters later [B=.13 SE = .04, t(213) = 3.04, p = .003] for exiting CEOs. Thus, for exiting CEO higher EPS predicted a higher percentage of negative emotion use two quarters later. For new CEOs, a higher EPS predicted positive emotion word use two quarters later [B=.05 SE = .03, t(214) = 1.72, p = .087]. Specifically, the higher the EPS in the current quarter, the higher the use of positive emotion words two quarters later.

Discussion

HLM analyses examined how language in the current quarter predicts EPS in the current quarter, as well as how language from the current quarter predicts earnings per share in the next quarter as well as the quarter after. Analyses unearthed an interesting and diverging pattern for use of "we" for exiting versus new CEOs. Specifically, *we* predicted lower EPS for exiting CEOs in the same quarter, whereas use of "we" predicted higher EPS in the subsequent quarter and 2 quarters later for new CEOs. Use of negative emotion words in the current quarter predicted marginally higher EPS in subsequent quarters for exiting CEOs. Additionally, use of "I" in previous quarters negatively predicted EPS in subsequent quarters for new CEOS.

These findings are interesting on multiple levels. In general, it appears as if EPS are more highly associated with the previous quarters' language for new

CEOs. This points to the idea that previous quarters' language might provide better information for financial analysts and other people investing in the stock market when making current financial decisions for new CEOs. Since new CEOs are still testing the waters and establishing themselves internally in their company and externally on the public market, the public may be using previous as opposed to current linguistic cues to influence their decisions. It may also take the public a while to "catch up" due to being risk averse or taking time to see the new CEO's policies taking effect.

Additionally, use of "we" seemingly plays a divergent role depending on CEO position (new v. exiting). When exiting CEOs used "we", EPS was lower in the current same quarter, whereas when new CEOs used "we" EPS was higher in subsequent quarters. This seemingly inconsistent finding most likely reflects the role of "We" in rallying the troops or unifying the top executive team or company. Indeed, after 9/11 Mayor Rudolph Giuliani increased in his use of "We" in an effort to promote solidarity and gather the troops (Pennebaker & Lay, 2002). Thus, when "we" is high performance is low in that quarter. On the other hand, when use of "we" is high, performance is higher in subsequent quarters. In addition, a heightened use of "we" by new CEOs might be an attempt at conveying organizational identification as well as a reflection of actual assimilation within their respective organizations. This is consistent with research suggesting that "we" is associated with greater group solidarity, identification with the group, higher supervisor ratings (Abe, 2009).

Interestingly, although use of "I" was not associated with exiting CEOs earnings per share, it did predict new CEOs earnings per share two quarters later. Since use of "I" is associated with self-focus (Duval & Wicklund, 1982), this suggests, that heightened attention to the self is associated with worse subsequent company performance. Additionally, use of "I" has been linked with narcissism (Raskin & Shaw, 1988), narcissistic CEOs and their performance (Chaterjee & Hambrick, 2007), as well as low status in general (Kacewicz, et. al, in press; Dino, et. al., 2008)

We also examined how EPS predicted language in the same quarter as well as language in the subsequent and two subsequent quarters later. Consistent with the relationship between use of "we" predicting EPS, the higher EPS the lower the "We" use for exiting CEOs for that same quarter. Thus, it seems that EPS influences use of "we" and we influences EPS, though the relationship is stronger in the former. Thus these findings are consistent with research suggesting that when things are going well, there is no need to use a heightened rate of "we" (Pennebaker & Lay, 2002).

Additionally, in contrast with language predicting EPS, there were associations between EPS and positive and negative emotion words. Specifically, the lower the quarterly EPS the higher the use of negative emotion words by new CEO in the subsequent quarter. Since new CEOs are partially evaluated on their financial performance, it is not surprising that lower earnings per share would result in increased negative emotion words in subsequent quarter. Further, the

higher the quarterly EPS the more positive emotion words new CEOs used two quarters later. Thus when the company is performing, this is evidenced in use of positive emotion words two quarter later.

Interestingly, a higher EPS resulted in higher negative emotion words for exiting CEO two subsequent quarters later. Although this initially seems contradictory, particularly in light of the association between EPS and new CEOs use of negative emotion words, the finding make more sense when we consider what they mean in light of CEO departure. It may be harder for exiting CEOs to leave their companies, particularly when performance is high.

SUMMARY

The chapter highlights the role of language in predicting EPS, as well as the role of EPS in predicting language for exiting and new CEO. Results suggest that pronouns are more likely to predict EPS in current and subsequent quarters, whereas EPS is more likely to predict positive and negative emotion words in current and subsequent quarters. Furthermore, our findings suggest that the association between language variables and EPS differs depending on whether the CEO is exiting or entering their first year within the company.

Chapter 7: General Discussion

CEOs and leaders, more broadly, use of language and communication is essential in their leadership process. Although researchers have long sought to uncover communication associated with leadership effectiveness, only recently have researchers begun to explore communication using computerized text analysis, enabling less subjectivity and efficiency.

The aim of this dissertation was to examine whether exiting CEOs who are exiting tenure use language differently than new CEOs entering tenure and how use of language is associated with company performance—using both language and company performance as predictors. By assessing word use using computerized word count tools, we were able to identify patterns of language use for an old CEO exiting the company versus a new CEO entering the company. In addition, we were able to identify language that predicted company performance, as well as the other side of the coin, company performance that predicted language use. There are no previous studies examining language in the context of a CEO transition.

As mentioned before, previous research examining language and company performance has drawn primarily from textual communications of managers, particularly CEO shareholder letters and annual report texts (Duriau, Reger, & Pfarrer, 2007). The current research expanded on this by using existing transcripts from earnings conference calls associated with quarterly reports. Specifically, analyses focused on the question and answer portion of these calls, thus allowing

for more spontaneous and naturalistic forms of communication styles that are probably more reflective of CEO characteristics associated with his or her performance.

We focused on language that has been previously implicated in effective leadership or leadership in general: first person singular pronouns, first person plural pronouns, and positive and negative emotion words. Distinctive patterns of language emerged depending on CEO status, old (exiting tenure) and new (entering tenure). Consistent with research on first-person singular pronouns, new CEOs began their term with an elevated use of "I" and then decreased substantially. Exiting CEOs had minor fluctuations in "I" use. Since use of "I" has been associated with self-focus (Duval & Wicklund, 1982), this suggests that new CEOs begin their terms with a high degree of self-focus/attention to self. Use of "I" has also been linked with lower status (Kacewicz et al., under review). Entering a new company requires establishing, assimilating, and "finding" oneself within the company culture and company hierarchy. Also, when new leaders enter the picture, team members begin to make status evaluations and form expectations of the leaders' performance (Moreland & Levine, 1982). Thus, it makes sense that a new CEO would enter their role self-focused and concerned with building a good reputation for themselves.

Although new CEOs enter with a high degree of self-focus, they quickly decrease in self-focus, presumably coinciding with assimilation within the company as reflected in increased use of first person plural words—"we". In

general, new CEOs used "we" in their speech at a higher rate than exiting CEOs. Since "We" has been implicated in group solidarity, collectiveness, and charismatic leadership (Gardner & Avolio 1998, p. 46), an elevated use of the word might be an attempt by new CEOs to convey assimilation and connectedness and effective leadership within their new company. Also, use of "we" has been found to increase following traumatic events, such as the world trade center attacks, presumably to unify and bring people together. Thus, a heightened use of "we" might be serving that purpose for new CEOs. Additionally, similar to findings by Sexton and Helmreich (2000) suggesting that captain's use of "we" increased over time, new CEOs increased in their use of "we" over time. This suggests that true assimilation and increased connectedness is occurring within the company. Indeed, research suggests it takes time to assimilate within a new role (Levine, 2010). It also points to the idea that new CEO are increasing building their reputation and status within the company. Accordingly, exiting CEOs did not fluctuate in their "We" use in their last year as CEO, suggesting that use of "We" could be more reflective of where CEOs stand in their early years of tenure. On the other hand, it could also reflect CEOs distancing themselves from the company since they know they are leaving.

Other language categories of interest were use of positive and negative emotion words, particularly positive emotion words, since they have been linked with various components of leadership—extraversion, charismatic leadership, transformational leadership. Interestingly, overall, new CEOs used positive

emotion words at a higher rate than exiting CEOs. They were very positive at the beginning of their tenure, decreased in positivity in the subsequent quarter, and then stabilized. This, in conjunction with the first-person plural findings, is consistent with research suggesting that role transitions are difficult and that it takes time to assimilate into a new role, become productive, and begin generating expected results (Levine, 2010). Similarly, these findings parallel research suggesting it takes the majority at least 90 days, or one quarter, to reach moderately high levels of productivity, and takes 6 or more months for the majority of external hires and 25% of internal hires to get comfortable in a new role (Institute of Executive Development & Alexcel Group, 2007).

On the other hand, in comparison to new CEOs, exiting CEOs used the fewest positive emotion words in the beginning of their last year of tenure, and then increased in positivity as their tenure came to an end. This suggests that exiting CEOs are attempting to paint a positive picture of the future of the company as well as demonstrate they are leaving on good terms. In addition, this might reflect their excitement about embarking on a new journey. Finally, although it is unclear why these CEOs are leaving their companies, an increase in positive emotion words could reflect exiting CEOs coming to terms with their departure regardless whether the reason is positive or negative. These findings are consistent with research that suggests that people tend to have a positivity bias for end experiences (O'Brien & Ellsworth, in press).

Although the base rate was low, exiting CEOs used more negative emotion words than new CEOs. Since they are about to leave, chances are that they have more flexibility in terms of what words they can use. Their reputation is less contingent on their current communication because investors and others within the company already have a snapshot of who they are and where they stand relative to the organization. Additionally, the stressors associated with tying up loose ends and making final arrangements before they leave might be reflected in their negative emotion word use. Furthermore, as mentioned above an elevated rate of negative emotion words may reflect an attempt by exiting CEO to conceal the true reasons for their departure, since occasionally the truth might reflect poorly on them, and the truth is generally not readily available to the public. Unfortunately, that information is difficult to discern and our data set does not include information on "real" reasons for departure.

In addition to examining patterns of language at different points in a CEO's career, we also examined the influence of language on company performance and the influence of company performance on language. For exiting CEOs, the higher their use of "we" in any given quarter the lower their financial performance in that quarter. Notably, this pattern held when we examined the influence of company performance on language, such that the higher company performance, the lower the use of "we". On the other hand, the higher new CEOs use of "we," the higher their performance in the following quarters. This is consistent with research suggesting that use of "we" is used as a potential way to unify

communities/groups following a negative event. Thus, when performance is low, CEOs increase in their use of "we" and when performance is high, CEOs decrease in their use of "we". The elevated use of "We" thereby results in higher subsequent performance. Although previous research has examined use of "we" in the context of traumatic events (9/11) this suggests that this phenomenon also applies to other negative situations.

Additionally, our study found that a new CEOs' degree of self-focus, as gauged by use of "I" negatively predicts financial performance two quarters later. Use of "I" has been linked with self-focus (Duval & Wicklund, 1982) and narcissism (Raskin & Shaw, 1988). This study suggests that a new CEOs' self-focus, in and of itself, results in lower company performance. Indeed, use of "I" has been linked with lower relative status (Kacewicz, under review), thus new CEOs who have not achieved high status or who have the mentality of a low status, self-focused individual perform worse. When a new CEOs' concern lies with performing well and their subsequent evaluation rather than the general welfare of the company this is evidenced in company performance down the line. The reality is the CEO does not stand alone, they are embedded within a larger organizational culture; thus, a self-focused mindset may prove deleterious for company profitability.

In examining how company performance predicted language, use of "We" by exiting CEOs was the only language variable that both predicted and was predicted by company performance. Organizational profitability was more likely

to influence use positive and negative emotion words. Specifically, a higher EPS resulted in lower negative emotion words in the subsequent quarter and higher positive emotion words two quarters later for new CEO. Since a new CEO's reputation is contingent on their performance, it is not surprising that their use of positive and negative emotion words would be influenced by financial performance. In contrast, higher financial performance for exiting CEOs resulted in a higher use of negative emotion words. Even though this initially seems contradictory, perhaps company performance influences how they feel about their departure. If the company is performing well, it is more psychologically challenging to disengage and leave the company, thereby reflected in heightened negative emotion words. On the other hand, if the company is performing poorly, it may be easier for the exiting CEO to disengage and not have any qualms in exiting his or her role. Another possibility, is that the hard work and stress associated with higher financial performance is finally beginning to take a toll on exiting CEOs and this is reflected in their negative emotion word use.

These findings point to various interesting roles of language in tenure and company performance. First, as demonstrated by the discrepant findings for use of "we" for exiting and entering CEOs, language may play a differing role depending on where a CEO is in their tenure process. Whereas "we" use negatively influences performance for exiting CEOs, it positively influences performance for new CEOs. This bolsters the idea that the mindset behind use of "we" varies if one is leaving or entering a position within a company. Second, in

examining how language predicted company performance and vice versa, a couple of interesting patterns emerged. Most striking, pronoun use (I, we) was more likely to predict company performance, whereas company performance was more likely to predict use of positive and negative emotion words. This is particularly interesting because it suggests that the psychological states that correspond to use of "I" and "we" hold more sway in predicting company profitability, whereas company profitability is more likely to influence use of positive and negative emotion words.

In addition, it seems as if there is a stronger relationship between use of language and company profitability for entering CEOs than for exiting CEOs. This makes sense in light of new CEO evaluation and touches on something we discussed above: When new CEOs enter their role, people internal and external in the company are evaluating their performance, their ability to take on that role, etc. Since their performance is primarily contingent on how well the company performs, it is not surprising that their language use, as a reflection of their attention as well as their psychological state, would influence company performance and vice versa. Since old CEOs are on their way out, their psychological states, as reflected in their language use, are not as easily swayed by company profitability, presumably because they're already in the process of detaching from the company. In turn, company profitability is not as easily swayed by exiting CEOs' psychological states. This phenomenon could partially stem from the fact that the internal and external community already have a large

enough sample of how the exiting CEO operates and therefore do not need to rely on the CEO's fluctuating psychological states. And, similar to the way the exiting CEO may be feeling, people inside and outside of the organization may have also begun to "detach" from this CEO.

Limitations, Implications and Future Directions

Limitations

Although this study had the advantage of using real world leaders, CEOs, in a naturalistic context, there are still a few limitations. A definite limitation is the ambiguity associated with CEO leave. There are many reasons why an exiting CEOs might leave a company—on account of being fired, decision to retire, decision to resign due to health reasons, receiving other job opportunities and offers, and more. This is a difficult variable to control for because real CEO and company motives are not stated up front and difficult to discern. For example, occasionally, when CEOs resign or retire they've been asked to step down and are allowed to "save face" by ostensibly making it appear that they are resigning or retiring. In addition, even if the CEO resigns voluntarily, it is still difficult to glean whether they are moving onto newer and better things or were disenchanted by company culture or new changes that were occurring, etc. The potential reasons why a CEO might leave or be asked to leave are endless. Thus, until we can decipher the exact cause, we can only guess.

In addition, as described above, the measure we devised to explore language associated with increasing or decreasing performance was problematic. This

measure was insensitive to the cyclical nature of stock market performance, particularly for some industries. In addition, since we only used two quarters to extrapolate increasing/decreasing performance a good deal of information was most likely lost. Future research should would benefit from a different measure.

Another potential limitation includes the fact that although language can provide a window into psychological states, it in no way, shape, or form tells us exactly what is going on. For example, we can't decipher exactly what leads a CEO to use "I." We can only guess what a high use of "I" might mean based on previous research. In addition, some language variables, such as *we* can play two different roles (Pennebaker, 2011). Specifically, *we* can signify "You and I". This use of "we" denotes and promotes cohesiveness and connectedness and group solidarity. This is the *we* related to greater problem solving within relationship discussions (Simmons, Gordon, & Chambless, 2005), higher supervisor ratings of performance (Abe, 2009), and charismatic leadership (Gardner & Avolio, 1998). New CEOs use this "We" to convey and reflect assimilation and unity within the organization. Thus, it is not surprising that use of "we" would predict more positive firm profitability for new CEOs.

On the other hand, *we* can be used as the "my-friends-and-not you we" "we-as-you we" and the "we-as-I we"(for more detailed description, see Pennebaker, 2011, pg 175-176). These latter forms serve to distance and create a barrier between the participants in the conversation. For example, when a leader says "We need to write that report," by *we* he means his employee, not him and the

employee together. This type of *we* can also be used as a method of diffusing responsibility—rather than saying, "I don't think our approach was successful," a leader can say, "We don't think the approach was successful." This distancing *we* is used more often as people move up the social hierarchy (Pennebaker, 1998; Kacewicz, under review). Exiting CEOs might be more prone to utilizing this *we,* thus explaining why use of *we* inversely predicts company performance and vice versa for exiting CEOs. Thus, unless each "we" is analyzed within the context of the sentence, it is difficult to disentangle what the relationships with "we" signify.

This segways into the next limitation—word count approaches such as this, ignore the context of the sentence and more broadly, the Q&A setting and the types of questions being asked. The questions posed by the financial analysts may differ depending on where a CEO is in their tenure process. For instance, financial analysts may ask new CEOs more personal questions, thereby eliciting more first-person singular on the part of the new CEO. In addition, the sentence within which the language variable is embedded might also give us a sense of the particular way it was used. Unless one examines not only the sentence in which the language variable is embedded, but also the questions posed by the financial analysts, it is difficult to extrapolate anything with certainty.

Thus, language by itself, can serve as a marker prompting further investigation and diagnosis for the real issue at hand. Language use could be driven by questions being asked, individual differences, psychological states induced by aspects of the top management team, company culture, discrepancy

between espoused values and actual values, actual and perceived future company performance, ad infinitum. This points to the next limitation—the issue of causal pathways.

Although our research highlighted differences between linguistic categories *predicting* performance (pronouns) versus linguistic categories *predicted* by performance (positive/negative emotion words) using a lagged analysis, this is a far cry from disentangling the direction of causality. Language use could influence company performance via many avenues, such as promoting team unity, culture transformation, and investor confidence to name a few. On the other hand, these avenues or company performance directly could influence CEO language. It is likely that the issue is much more complex and that there is an interplay between external factors and language. For example, company performance may both influence and be influenced by CEOs' internal states, as reflected in language use.

Another question includes the generalizability of these findings to other leaders. Although CEOs are arguably the quintessential leaders, they comprise a very small subset of all leaders and are a unique subgroup within the population. For example, they presumably have higher access to resources and more power than the average leader. Despite this, previous research does not differentially apply leadership theories based on type of leader.

Implications

Our study makes several important contributions to leadership and language research. First, it highlights the relevance of investigating language as a marker of leader transition and performance, suggesting that language can be used as a naturalistic, unobtrusive method to explore various facets of leadership. Investigating CEOs' use of language has multiple benefits. Obtaining information via interviews and questionnaires on large samples of leaders, particularly CEOs, is extremely difficult and time consuming. CEOs are a particularly hard group to reach and even if they are reached, it takes time to interview and obtain relevant information. Interviews are also biased in the sense that they are reliant on interviewer questions—information that the researcher/interviewer deems important. Questionnaires and surveys, on the other hand, suffer from self-report bias. CEOs and their teams and followers, will complete reports in ways that they want to present themselves or to be viewed. Thus, language allows us to examine CEOs' internal and external states in a more unbiased as well as less time-consuming way.

Second, this research provides validation for use of lower order language analysis, particularly for the power of pronoun use. Previous language research has examined language using higher order language analyses we discussed above. Higher order language analysis involves coding for rhetorical devices or examining speeches deemed as charismatic to glean what differentiates them from less charismatic speeches. Similar to the limitations discussed for non-language

based methods, higher order language analysis can also be time consuming and suffer from experimenter bias. In contrast, lower order language analysis is arguably more objective, particularly when examining function word categories which are fairly cut and dry in terms of what words fall into them. In addition, as mentioned in the introduction, function words, such as pronouns, are not consciously used or altered, providing an excellent way to observe psychological states without encountering self-perception and presentation biases.

Finally, previous research examining CEO speech has focused primarily on textual speech, such as letters to stock-holders or annual press releases (Duriau, Reger, & Pfarrer, 2007). This research examined spoken speech in a more naturalistic context-- the question and answer portion of quarterly conference calls. In this segment, financial analysts ask questions and the CEO generates answers. Although preparations may occur prior to the call, the questions are generated by financial analysts on the spot and thus presumably require some degree of spontaneity on the part of the CEOs. Consequently, using the Q&A portion allows for more naturalistic speech that is less tainted by preparations based on what the CEO would like others to see.

This research has several potential implications for researchers, professionals, leaders, and organizations. Language analysis can be used to gain a better understanding of leadership, teams, and organizations. In particular, language can be used as a way to assess a CEO or leaders degree of assimilation within an organization or team at the beginning of their tenure, the end of their tenure, or at

any point in their career. Further, this method may permit identification of leaders with a high ability to assimilate and facilitate interventions/directions to successfully immerse new leaders into existing management teams and cultures. In addition, language can be used as a way to gauge and possibly predict company performance. Use of language can help us gain insight into what psychological states, team dynamics, and so on might influence a company's performance and thereby create potential interventions to preempt poor company performance. Furthermore, since our results suggest that company performance influences subsequent use of positive and negative emotion words, perhaps professionals can work on strategies to improve leaders' outlook and attitude following poor performance outcomes.

Language assessment may also play be used by leaders as a self-evaluation technique. Although it is still an open questions, these methods have the potential to help leaders gain awareness of their language use and a sense of how their words may be reflective of their personality, psychological state, degree of assimilation, company culture, and company performance, among many other variables. Gaining awareness may prove beneficial for leaders. In addition, this assessment tool can be used in conjunction with existing methodology currently being used to provide feedback to leaders.

Finally, language analyses can help enhance effectiveness of organizations by furthering our understanding of current organizational culture by for example, using content words to examine espoused values, what company claims to believe

in, and using style words to examine shared tacit assumptions, or deeper level of thought and perception that is driving overt behavior and language (Schein, 1999). Language can facilitate methods to close the gap between desired (espoused beliefs) and actual (shared tacit assumptions) beliefs.

Future Directions

The results of the dissertation point to the importance of language use as a method of detecting various facets of leadership effectiveness. Since there is growing evidence that Top Management Team (TMT) group dynamics are directly related to company performance (e.g., Eisenhardt, & Zbaracki, 1992; Peterson, Owens, Tetlock, Fan, & Martorana, 1998), future research might assess how language on the part of the CEO or other members of the top management team can reflect or predict team cohesion and other group dynamics. Considerable evidence suggests that cohesion within a group or TMT is associated with positive outcomes (Beal, Cohen, Burke, & McLendon, 2003; Gully, Devine, & Whitney, 1995; Mullen & Copper, 1994). Indeed, various researchers have found that level of cohesiveness in TMTs is positively related to return on investment and sales growth (Hambrick, 1995; Katzenbach & Smith, 1993; Smith, Smith, Olian, Sims, O'Bannon, & Scully, 1994). Furthermore, within-team communication is related to effective team performance (Hyatt & Ruddy, 1997; Campion, Papper, & Medsker 1996), suggesting that a glimpse of a CEO's relationship with their top management team can be reflected in how they communicate with their top management team.

A promising method to explore degree of cohesion within a team is through language style matching (LSM). The degree to which people within a group match in their use of function words—language style matching (LSM)—can serve as an indicator of cognitive coordination or alignment (Pickering & Garrod, 2004) which, in a TMT, is likely to be related to cohesiveness (Gonzales, Hancock, & Pennebaker, 2009). Research suggests that LSM promotes group liking, coordination and cohesiveness, and peaceful negotiation (Gonzales, et al, 2009; Kozlowski & Ilgen, 2006; Ireland & Pennebaker, 2010; Taylor & Thomas, 2008). LSM can potentially be used as a holistic measure of the degree to which dyads or groups are coordinated in terms of the traits function words reflect. Thus, in theory, the degree to which a CEO uses function words similarly to their TMT might serve as a marker of higher group quality, coordination, and, in turn, company performance. Thus, future research could explore how LSM is associated with group dynamics.

Another incredibly important area of research includes exploring the link between reason for old CEO departure and language use. Although reason for CEO departure is very difficult to decipher (as discussed above), it could provide a window for investors and people within the company to glean why a CEO is leaving their company. Language may provide important information about potential discrepancies in espoused values of the company versus actual behavior (theory in use), signal issues within the company, and potentially information the company is trying to conceal, among other things.

Future directions could also examine why CEOs are speaking the way that they do and how this in turn is associated with company performance. Currently, we can only guess what psychological states precede language use and in turn what is influencing those psychological states. Future research would benefit by exploring the interplay between language and various features of the company environment—company culture, executive team cohesion, alignment of values, investor confidence, status. This would facilitate creation of interventions and directions to benefit future leaders.

CONCLUSIONS

Previous leadership research has examined facets of leadership using various methodologies, including self-reports, interviews, and constructs such as transformational leadership and charisma. Although these methods have yielded valuable insights, there are various limitations including time, reasonable access to certain leaders, particularly CEOs, self-report bias, and more. More recently, researcher has begun to employ language analysis as a more naturalistic, less invasive method to explore effective leadership. Quarterly conference calls provide excellent naturalistic language samples to explore dimensions of CEO leadership. In this dissertation we examined CEO leadership in the context of naturalistic language in the question and answer portion of quarterly conference calls. Our findings highlighted the role language plays in assimilation into a new role as well as company performance. Researchers, OD professionals, and leaders, are encouraged to explore naturalistic language use as a method to gain insight

into leadership and facilitate interventions and directions to benefit leaders, teams, and corporations.

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